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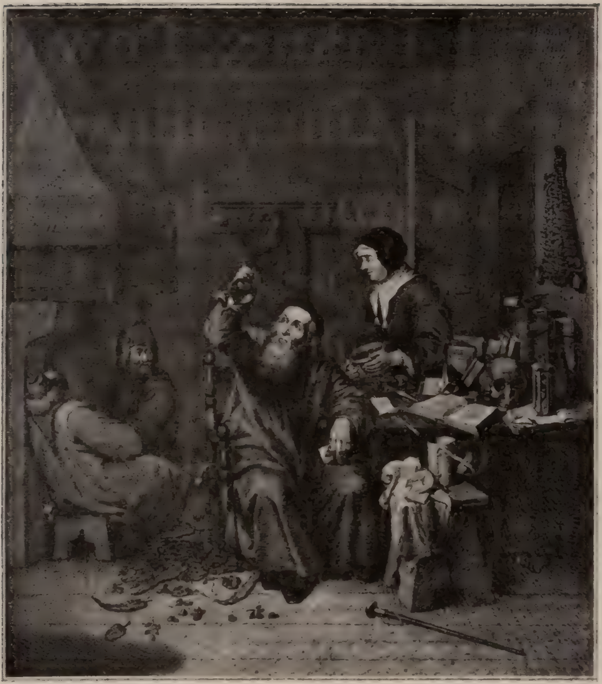


I.

We will endeavor, in the two pictures presented to our readers with this number of the JOURNAL, to illustrate some of the manners and habits of the physicians of the 17th and 18th centuries.

The physician's consulting-room, painted by Caspar Netscher in 1659, and engraved by Jacob Folkema in 1763, seems to us a caricature, but was probably but little exaggeration of the actual habits and surroundings of the general practitioner outside the cities of that day. Microscopy, as it was called, was made a prominent feature by the diagnostitians of that period, and we perceive in each picture presented the *pot de chambre*, or the urinal, is a prominent feature. The practitioner had already learned the importance of this excretion, but had not yet advanced to the exactness of our modern urinalysis. We see the doctor has taken some of the fluid into a flask which he shakes and holds to the light, and observes the bubbles which rise, its density, as far as this crude method would give it to him, its color, odor, and even taste, were gravely ascertained, besides the sensation conveyed by rubbing together the thumb and finger which had been wet with it. The patient nurse, the anxious patients, the materia medica, and the ever-present gold-headed cane on the floor, give a picture which tells us more than can be told by the pen in the brief space at our command.

Previous to the beginning of the 19th century the doctor could be recognized by his dress.

The serpent-twined staff of Esculapius which Moses erected in the wilderness, that those who looked upon it might be healed, had by process of evolution become the gold-headed cane without which no respectable physician would have presumed to pay a professional visit, or even be seen in public.

Long as an alpenstock, with a heavy gold knob or cross-bar at the top, it was the mystic wand with which every prudent aspirant to medical practice down to the present century was provided. The celebrated "gold-headed cane" which Radcliffe, Mead, Asken, Pitcairn and Baillie successively carried, occupies a conspicuous place among the honored *lares* and *penates* of the Royal College of Physicians, and gives title to one of the most entrancing little books in medical literature. It was for many years a *rara liber*, but has within a few years been reprinted, and is again to be found in the book-stores. The knob at the top generally contained a vinaigrette, which the prudent doctor held to his nose when he approached a sick person, so that its fumes might protect him from the noxious exhalations of his patient.

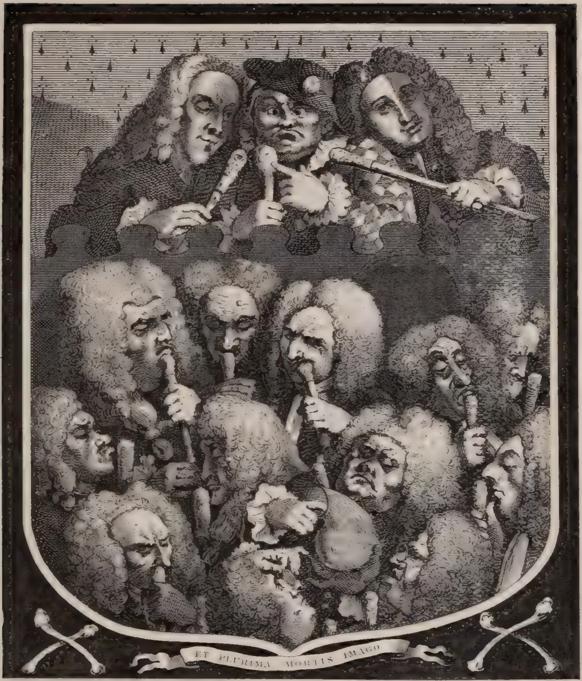
With some of the more smart buckling kind the dignified staff was replaced by the sword, and in many of the portraits of Paracelsus he is represented as carrying a sword with the hilt surmounted by a globe, upon which is the word "AZOTH:" and we are told by Hudibras that:

> "Bombastes kept the devil's bird
> Shut in the pummel of his sword.
> That taught him all the cunning pranks
> Of past and future mountebanks."

Doubtless the cadences of Mercury impressed the imagination of the credulous in those days of superstition even more than the mystic sign of Jupiter, with which we commence all our prescriptions, does in our enlightened 19th century.

Next to his cane, the doctor's wig was the most important of his accoutrements.

> "Each son of Sol, to make him look more big,
> Had on a large, grave, decent three-tailed wig;
> His clothes full-trimmed, with button-holes behind,
> Stiff were the skirts, with buckram stoutly lined;
> The cloth-cut velvet, or more reverend black,
> Full-made and powdered half-way down his back;
> Large decent cuffs, which near the ground did reach,
> With half-a.dozen buttons—fixed on each.
> Grave were their faces—fixed in solemn state,
> These men struck awe; their children carried weight.
> In rev'rend wigs old heads young shoulders bore,
> And twenty-five or thirty seemed three score."



II.

A velvet cap was sometimes worn, and others whose wigs were famous wore no other head-covering. A hat would have not only disarranged the beautiful locks, but also have obscured their glory.

The last to adhere to the old costume was Henry Rowell Reynolds, who attended George III. during his long and melancholy affliction, and died in 1811. He was the Brummel of the faculty, and persisted to the end in wearing his antique costume of "a well powdered wig, silk coat, breeches, stockings, buckled shoes, gold-headed cane, and lace ruffles," with which he commenced his career.

We are told that previous to Charles II.'s reign, physicians rode to visit their patients on horseback, sitting sideways on foot-cloths like women. Wm. Harvey rode in this manner, and wore a short dagger. With the "Restoration" came the carriage of the London physician, which, from the little coach with two horses, became in Queen Anne's reign a chariot and four, and sometimes six horses.

To this imposing costume, in order that the ambidextrous man of science, with his eyes in his finger tips might preserve his hands warm and delicate and so be able to descriminate to a nicety the quality of his patient's arterial pulsation, we are told that he made his rounds in cold weather, holding before him a large fur muff, in which his fingers and forearms were concealed.

When to all this we add the massive gold chain and other decorations of some of the medical fathers of Continental Europe, we perceive that the ancient physician was at least imposing.

The picture above, known as The Undertakers' Arms, by Hogarth, shows a consultation of big-wigs, with their gold-headed canes; and like the practitioner in his office in the preceding picture, their opinions seem to depend upon the condition in which they find the contents of the urinal which one of them is examining.

The heads shown are, it is believed, all portraits of eminent physicians and notorious quacks of Hogarth's time. The identity of the individuals in the lower group is unknown to the writer, except that one of them is Dr. Pierce Ord, of St. Bartholomew's Hospital, and another the celebrated anatomist and accoucheur, Dr. Bamber.

The central figure of those outside the pale is that of "Crazy Sally," or "Mother Mapp, the bone setter." She is described as an "enormous, fat, ugly, drunken woman, known as a haunter of fairs, about which she loved to reel, screaming and abusive, in a state of roaring intoxication." This charming lady became so much esteemed for her skill (?) as a "bone setter" that the town of Epsom offered her 100 pounds if she would reside there for a year. Patients of rank and wealth flocked to her from every quarter. Her income was large; her journeys between Epsom and London were made in a chariot drawn by four horses, wearing splendid liveries. She outlived her fame and spent her last days in extreme indigence, and was buried by the parish. On Mother Mapp's right is seen Spot Ward (as he was called, from a mole on his cheek), of drop and pill notoriety. This well-known nostrum-monger was better acquainted with chemistry and quackery than with the legitimate practice of medicine, although he at one time attended George II., and rode about in a showy state coach, hung so near the ground as to require only a single step,and drawn by four horses. The Society of Arts erected a fine statue of him in the Adelphi, probably on account of his having devised the simple method of manufacturing "oil of vitrol," which, before his method came into use, cost as high as 10 shillings an ounce.

And on her left is the celebrated Chevalier Taylor, the oculist. He is described as a "cunning, plausible, shameless blackguard," extremely successful in his vocation of quack. He traveled all over Europe in fine style, lecturing, after the style of a mountebank, in the places visited, and is said to have performed his operations with great dexterity; but "he undertook everything (even impossibilities), and promised everything. He styled himself 'The Chevalier Taylor, Ophthalmiator, Pontificial, Imperial and Royal.' "

THE

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ORIGINAL ARTICLES.

OPHTHALMOPLEGIA EXTERNA.[1]

BY JOHN C. SHAW, M.D. AND C. F. BARBER, M.D.

Graefe used the name ophthalmoplegia as early as 1867. In 1878 Jonathan Hutchinson described a number of cases of paralysis of the internal muscles of the eye—the iris and ciliary muscle—suggesting that the probable seat of disease was in the lenticular ganglion (ophthalmic or ciliary ganglion), and proposed the name of ophthalmoplegia interna for this condition.

In 1879 he also reported a number of cases of paralysis of the external muscles of both eyes, with ptosis; and for this condition he proposed the name ophthalmoplegia externa. These two names convey no idea of the pathological changes giving rise to these symptoms.

Paralysis of one eye muscle is of somewhat common occurrence; the external rectus is especially often affected; it may occur suddenly and be complete; it is observed in some cases of locomotor ataxia; in diabetes. In some cases it is evidently an acute neuritis. It may be the result of syphilitic disease, when the onset of paralysis will be gradual. A group of cases characterized by paralysis of the third, fourth and sixth nerves is known, in which the lesion is a degeneration of the ganglion cells of the nuclei of these nerves; analogous to the condition observed in the ganglion cells of the anterior horns in progressive muscular atrophy, and in the cells in the nerve nuclei in the medulla oblongata in glosso-labio-laryngeal paralysis.

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[1] The history of this case and the photographs were presented to the Brooklyn Society of Neurology by Dr. C. F. Barber.

A group of cases in which the paralysis of the eye muscles is symmetrical and partial were clinically well studied by Jonathan Hutchinson, and he suspected from their symmetry that they were due to central disease. A knowledge of the subject has been very much increased by the pathological studies of Westphal, Leube, Wernicke, Bernhardt, Nothnagel and others. It is to the consideration of one of the cases that I ask your attention.

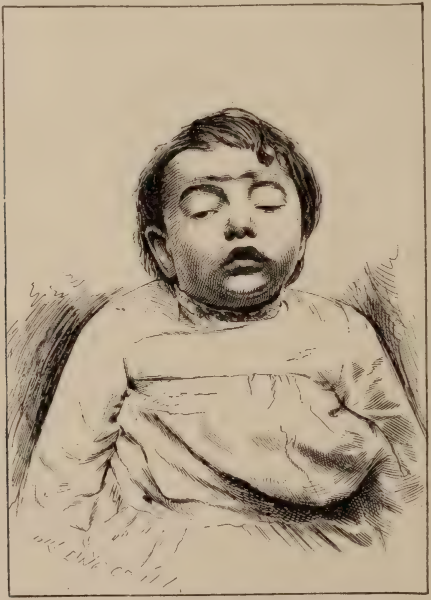

FIG. 1.—Showing the Double Ptosis.

A. K., a little girl, aged two and a half years, was brought to the clinic at the Brooklyn Eye and Ear Hospital. Coming under the observation of Dr. Raub, she was transferred to my clinic for Diseases of the Nervous System in that hospital. She was examined by me September 25, 1890. The mother of the child is evidently a healthy woman. The father is a hard drinker. There appears to be no tubercular or neuropathic family history as far as can be learned. There are two older children, both healthy. The little girl has been in good health since birth, until June, 1890, when she had what the mother calls "bronchitis." She coughed. She was not under the observation of a physician.

In June her attention was for the first time directed to something wrong with the child, by a neighbor telling her the child looked sick and stupid. The mother is an intelligent person, but has had many domestic trials and hardships, which perhaps explains her not having at this time observed the child more carefully. She now found that the child was very drowsy, and its eyelids drooped. Soon afterward it began to have attacks in which the feet would suddenly give way from under her, and she would fall on the floor. There was apparently no unconsciousness or convulsion. She appeared to use her extremities as well as she ever did. There were attacks of intense drowsiness, which would last for days. Then she would brighten up and play about. At times she screams without apparent cause. In the past two weeks she has passed urine frequently and in large quantities.

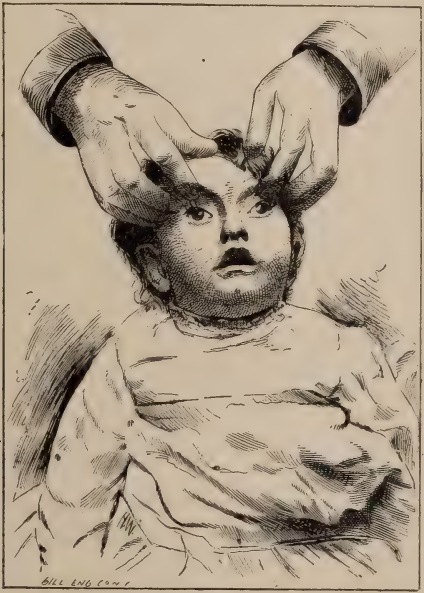

FIG. 2.—Showing the divergence of the eyeballs, due to paralysis of the Internal Recti. (From photographs kindly taken for us by Dr. Criado.)

Examination shows that she has ptosis of both eyes, but it is more decided in the left eye. There is paralysis of the internal rectus of left eye. No other eye muscles affected. The pupils are normal in size, and react to light and accommodation.

On October 1st her mother reports attacks of stupor coming on suddenly. At table she would suddenly stop chewing when the attacks occurred. They might last a short time, or as long as an hour.

Examination shows the ptosis has increased. The left eye is entirely covered. There is complete divergent strabismus of left eye; no other muscles of that eye affected. In the right eye the ptosis is almost as decided; there is now paralysis of the internal rectus of this eye. The pupils are both of normal size and react to light and accommodation. There is no paresis or anæsthesia anywhere. The child uses the arms and legs well; walks about and plays. She is, perhaps, a little unsteady when moving about, but it is not at all marked. Urine is found to contain sugar.

Nov. 2d.—Condition somewhat the same. She is exceedingly irritable; sleeps a good deal in the daytime, and keeps awake at night. She still walks about and uses her arms and legs normally. The condition of the eyes is the same, except that now the left pupil is partially dilated, with very slight reaction to light and accommodation.

Nov. 21st.—Left pupil still partially dilated and does not react to light and accommodation; right pupil normal in size and in reactions; no other eye muscles paralyzed in either eye. Patient was visited by Dr. C. F. Barber at intervals of time after this, but no change observed.

February 16, 1891.—The child is seen by Dr. J. C. Shaw. Mother reports that there has been no change up to within a few days ago. In passing, it may be stated that under treatment with cod liver oil and tonics the child has improved very much in physical condition; formerly thin, it is now quite stout.

On the night of February 13th she began to complain of pain in her head, which became so severe, she cried a good deal. She vomited; and this has been repeated several times since. In the day she runs about, but occasionally falls, dropping suddenly on the floor. She often complains of headache. There is no paralysis. Right eye appears to be slightly protruded forward, a condition which has not existed before. Both pupils are dilated alike, and no reaction to light or accommodation. The internal rectus on both sides and the levator palpebræ are the only muscles paralyzed. Vision is apparently quite good. The ptosis is still greater on the left than on the right side. Attempts have been made to obtain an ophthalmoscopic examination, but without result, owing to her restlessness. To-day a successful attempt is made, which reveals a normal fundus. There is not the least pupillary reaction. There is no difficulty in swallowing, and no paralysis.

Feb. 21st.—Last night she had an attack which the mother thought was a convulsion.

Feb. 22d.—Patient is conscious, screams and cries a good deal; does not wish to be disturbed. There is no change in the condition of the eye.

Feb. 24th.—She has gradually ceased screaming and stupor developed. Face is livid colored.

March 1st.—Stupor has gradually deepened, and death occurs without convulsion. All efforts to obtain an autopsy were unavailing.

The diagnosis in this case is most easily arrived at by the method of exclusion. These symptoms may occur in the course of diphtheritic paralysis; in cerebral syphilis; in intracranial tumor; in disease of the nucleus of origin of the nerve; in intracerebral tumor.

1st. There was no history of diphtheria. The absence of paralysis of the muscles of deglutition, which is so common in diphtheria, is sufficient to exclude diphtheritic paralysis.

2d. Syphilitic brain disease would, and does, occur at the base of the brain, or at the foramen of exit of the nerves, causing pressure and, consequently, paralysis. The absence of a history or evidence of syphilis, and the involvement of only some branches of the third nerves, are decidedly against such a view. All the muscles supplied by the third nerve would be paralyzed in syphilitic disease, interfering with them, and we should expect the fourth and sixth nerves to be involved in the syphilitic thickening, owing to the position of these nerves at the base of the brain. In addition, these syphilitic lesions at the base of the brain are secondary and tertiary symptoms, and not the result of inherited syphilis.

3d. Intracranial Tumor.—It might have been possible for a tumor to develop at the base of the brain and cause paralysis of one or both third nerves, but we should soon have the fourth and sixth nerves involved, for the same reason that was given in considering syphilitic disease; the absence of severe headache as an early symptom and the absence of choked disc, which was determined later, were against such a diagnosis.

4th. Disease of the nucleus of origin of the third nerve could be excluded, as in cases of such disease the third, fourth and sixth nerve nuclei are involved in the disease, which was not so in this case.

5th. Intracerebral Tumor.—The gradual involvement of one muscle after the other in the distribution of the third nerve on both sides, not of equally great intensity, the late involvement of the pupillary muscles, point to a gradual compression of the fibres of the third nerves as they pass through the tegmentum and crusta; the presence of glycosuria, the attacks of falling, and *quasi petit mal*, all pointed to a slowly advancing lesion in the quadrigeminal region—to tumor.

A few years ago it might have been difficult, if not impossible, to make such a diagnosis. In 1878 Hausen and Volckers (Archiv f. Ophthalmologie, Bd. xxiv., and referred to by Ferrier, "Functions of the Brain") showed that the nuclei of origin of the third nerve were composed of separate secondary groupings of nerve cells which serve to innervate the individual muscles under the control of the oculo-motor nerve. The more recent clinical and pathological studies of the authors previously mentioned have confirmed these physiological observations, with, however, some modifications. The arrangement of this nerve nucleus into separate nests, as it were, each enervating a separate muscle, explains the paralysis of separate muscles supplied by the third nerve, such as the double ptosis (paralysis of levator palp. on both sides), as observed in this case for a considerable time before other muscles were affected. This peculiar distribution of the paralysis is distinctive of intracerebral lesion. In a recent study of the diagnosis of diseases of the corpora quadrigemina by Nothnagel, he considers similar cases to the one here recorded, and he thinks ophthalmoplegia existing in both eyes, but not quite equal in extent, is distinctive of lesions in the quadrigeminal region.

PTYALISM OF PREGNANCY, WITH THE REPORT OF A CASE.

BY O. A. GORDON, M.D.

Read before the Brooklyn Gynæcological Society, June 6, 1891.

It is not with the expectation of shedding new light that I bring the subject of ptyalism of pregnancy before the Society, but with the hope that the discussion may clear away some of the clouds that enshroud the subject. Whether it is because it has been considered a trivial matter, or because very little is known about the pathology and treatment, that so little can be found in obstetrical works bearing upon the subject, I am unable to decide; but I incline to the latter view. I am sure that the physician who is unfortunate enough to have a case of profuse and prolonged salivation of pregnancy come under his care will cease to consider it trivial. If we turn to the standard obstetrical works, we find the matter disposed of in from six to twenty lines, all agreeing that it is of nervous origin and not readily controlled by remedies. Cases are cited in which the discharge of saliva amounted to several quarts a day, requiring the patient to keep a basin by her side, incessantly emptying the mouth, reducing her to a condition giving rise to serious anxiety.

Playfair says a profuse discharge from the salivary glands is an occasional accompaniment of pregnancy. It is generally confined to the early months, but occasionally continues during the whole of gestation and resists all treatment, only ceasing when delivery is over.

Lusk says incessant flow of saliva to the extent of two or three pints in the course of a day has been observed. Small doses of atropin, pilocarpin, viburnum prunifolium have been severally recommended.

Cazeaux says it rarely lasts more than two months. In a large portion of cases ptyalism ceases spontaneously, for no confidence can be reposed in the measures generally resorted to for its removal. Some advantage, however, may be derived from the use of aromatic infusions and astringent gargles. I have found it useful to have the patient keep a piece of sugar candy constantly in the mouth, lumps of gum arabic, pieces of ice, etc. It is useful to be acquainted with these various measures, if only to keep up the patience of the sufferer by varying them from time to time until the discharge ceases of its own accord.

The views of these writers are in accord with most writers on the subject.

Mrs. X., æt. 30, born in United States, applied to me for treatment for salivation of pregnancy in the first month of her fourth pregnancy, stating that she had been troubled in the same way in her previous pregnancies, and that persistent treatment had failed to give her the slightest relief. Also, that her great-grandmother had given birth to nine children; grandmother, four; mother, five, and that profuse ptyalism had persisted during the whole nine months of each of these pregnancies. Fifteen months previous I had operated on her for a large rectocele, and she was, at the time of becoming pregnant, wearing a pessary for retroversion of the uterus and prolapsed ovaries. General health good. There was a constant flow of saliva from the salivary glands, requiring the incessant use of a handkerchief or a vessel for its reception. She complained of great dryness of the throat and inability to swallow the saliva. This was accompanied by vomiting, the constant dribbling interfering with digestion and sleep to such extent that the patient became considerably emaciated and weakened. Naturally of a neurotic temperament, her nervous system was considerably shattered at the close of gestation. I tried an astringent gargle, ice in the mouth, atropin, pilocarpin, bromides and counter-irritation over the parotids. In fact, I nearly exhausted the materia medica in my efforts to give her relief. I also tried stretching the cervical canal, and the application of comp. tincture of iodine to the cervical endometrium, all of which afforded her not the slightest relief, the trouble continuing until one week after delivery at full term..

DISCUSSION.

Dr. Dickinson.—I have seen but one of these cases. It was as hopeless, but did not have quite so much effect on the patient's general condition as the one which Dr. Gordon reports. In this case, when the patient's attention was occupied, or while about her household duties, her trouble was not very marked, but when she lay down to sleep, or when she would sit down to read, or whenever she was at rest, she would have her cup underneath the angle of her jaw day and night. The quantity was not measured. Nothing relieved her much until the sixth month, when the flow ceased. The probability was that it ceased of itself, and not that the remedies did it any good. The only thing to which she was willing to credit any benefit was the general use of the galvanic current, with one electrode in the back of the neck and one in the hand. She had it every day for a couple of weeks, and during that period she was somewhat improved, which, I think, was due to the effect of the general tonic to her nervous system.

Dr. Chase.—I take it these cases are rare and infrequent. It has never been my fortune or misfortune to see one.

Dr. McNaughton.—I have had no personal experience and have not seen cases of that kind, but I cannot see why, acting on Dr. Dickinson's suggestion, the attending physician could not have made local use of galvanism directly over the parotid gland, using the positive pole there, and I think it would have controlled it. If you remember in the paper read here a short time ago on galactorrhœa, a case was cited as going on at that time which had resisted all treatment that had been tried, and three applications of galvanism dried up the flow.

Dr. Dickinson.—It was so used, but the patient made so much fuss about the metallic taste that we had to use it low down on the spine instead. It might possibly have been used more persistently.

Dr. Raymond.—Is the trouble always confined to the parotid gland? Of course the parotid gives the most watery discharge; but are not the submaxillary and sublingual glands affected as well?

Dr. Gordon.—I cannot say as to that. Strange as it may seem, this was the second case of this trouble that I had in my practice that same year. This other case which I made no mention of here had been pregnant four times. Once she carried the child to term, and the ptyalism ceased a week or two after delivery. The next pregnancy she suffered in the same way up to the third month, when she miscarried. I attended her with two miscarriages after that and ptyalism had accompanied them up to the third month, and it was quite profuse. She assured me in the most positive way that she had done nothing to bring on these miscarriages, and all I know about her is what she told me about the pregnancy that went to term. She said she tried everything and her physicians tried everything to relieve her, but without success.

In regard to electricity over the parotid, I forgot to mention that I did try it there, but it seemed to have no effect whatever. I used faradism.

Dr. Dickinson spoke about the patient he saw having less trouble when her mind was occupied—it seemed to be just the opposite in this case. In conversation on almost any subject the saliva seemed to flow more freely, and the patient would hardly speak three words without stopping and emptying her mouth on a handkerchief.

Dr. Raymond.—Was the flow increased during conversation? Was it not the mere movement of the jaw that did it?

Dr. Gordon.—It seemed the same in repose. It interfered with her sleep to a great extent, so that she became considerably exhausted. I put her on large doses of bromide at night, and that had no effect.

Dr. Raymond.—Was there any enlargement or tenderness of the parotid that you could discover?

Dr. Gordon.—No, sir.

Dr. McNaughton.—I meant to suggest that one pole—the positive—be put into the duct, where it could be quite easily introduced.

Dr. Gordon.—I shall have another opportunity to treat this patient, and I will try that.

Dr. Emery.—Did Dr. Gordon try the effect of antipyrin in this case?

Dr. Gordon.—I have no recollection of trying antipyrin, although I tried almost everything in the materia medica.

ADDRESS TO THE GRADUATES OF THE TRAINING SCHOOL OF ST. LUKE'S HOSPITAL, S. BETHLEHEM, PA.

October 17, 1891.

BY W. L. ESTES, M.D., MEDICAL DIRECTOR.

Mr. President and Gentlemen of the Board of Trustees, Ladies and Gentlemen, and Young Ladies of the Training School:

When the request that I should deliver the Annual Address was first received from the pupils of the Training School, the proposition seemed to me utterly untenable. When it was repeated, however, and seconded by a number of the alumnæ of the school, the request was so flattering that I immediately set about finding some adequate excuse for venturing to even think of occupying the position formerly filled by such celebrities as Jacobi, Mundé, Raymond, Gerster and West. Finally it occurred to me that this occasion would mark the decennial anniversary of the present management of St. Luke's Hospital, and, also, that it would be signalized by a re-union of the graduate nurses of the Training School. My great desire to briefly epitomize the work of the institution during the last ten years, in order to show the community of the Lehigh Valley that their confidence, support and alms have been well given, as well as to indicate to the nurses my high appreciation of their special request, overcame other considerations, and I have yielded, as men *usually* do, at woman's behest. If any one shall, therefore, feel aggrieved by the choice of a speaker, they must do as patients ordinarily do—*blame the nurses for it.*

I think, Gentlemen of the Board of Trustees, that you were the pioneers in America in adopting for your institution the plan of *individual* responsibility for the whole executive management, both lay and medical. As this question is one of great interest and importance to-day, and one which is agitating more and more the minds of philanthropists engaged in work similar to yours, a demonstration of the success of your advanced ideas ought to, and doubtless will, have much force in future considerations of hospital management.

When, ten years ago, your Board determined to appoint as general executive officer, a physician, and make him responsible for the inner working of the whole establishment, the time was ripe for the undertaking. The hospital had been doing efficient work for eight years. Already 2,641 patients had been treated in the hospital and out-door department. From a large ordinary double-brick dwelling house converted to the purpose, located in the heart of the town, the hospital had, five years previously, been removed to the fine location now occupied, and which had been purchased through the generosity of the members of the Board of Trustees and contributions from the community generally. During five years the old wooden water-cure building had been used for all the purposes of the hospital. The munificence of Judge Packer made tangible the desire, and accomplished the foresight of the trustees. A model pavilion ward and offices had just been erected and completed under the personal supervision and care of the present honorable Secretary of the Board of Trustees. His careful study and investigation of modern hospital architecture resulted in a plan and specifications in which practical use for ten years has suggested but few and minor changes. The men's pavilion and the operation-room departments, the kitchen and laundry were completed in 1881. It was then, just ten years ago, that the present system of management was inaugurated. The new buildings were occupied November 1, 1881. There were beds for twenty-four men. Provision was made for the treatment of the few women patients who usually applied for treatment, in the old water-cure building, which was also the lodging place for the superintendent and hospital corps generally. The provision for the treatment of women was soon wholly inadequate, and, on account of the wide separation from the other wards, very inconvenient and expensive. Understanding this, Mr. Robert Lockhart came nobly to the assistance of the institution. As a fitting memorial of a noble woman, his wife, he built and gave to the hospital the ward for the treatment of women. "A monument more lasting than brass," a haven from which prayers of thankfulness must ever be ascending from grateful hearts, and blessings, like sweet incense, rising ever to the memory of Annie P. Lockhart. This ward was opened and formally dedicated in May, 1885.

The same year the Training School for Nurses was formally established. It was then most uncomfortably evident that the old water-cure building was entirely insufficient for the uses of an administration building and lodging place for the personnel of the hospital management. It is the characteristic of the Board of

Trustees of St. Luke's Hospital to at once set about obtaining any improvement or advancement which is demonstrated a necessity for the good of the institution. Subscription books were opened, the list, headed by the trustees themselves, soon grew to proportions. The whole Lehigh Valley responded nobly. Workmen vied with their employers in the eagerness of their subscriptions. Before a year expired a sufficient sum was promised to guarantee the erection of the present administration building. Work was begun on the building in the spring of 1887, and the building was occupied in the early part of 1888.

The institution then lacked a separate pavilion for the treatment of children. This great need was met by Mr. and Mrs. E. P. Wilbur. As a tribute to the memory of a noble boy, they erected a pavilion for the treatment of children's diseases, as complete in its arrangements and as excellent of construction as can be found in the United States. A life so brave and full of suffering finds a fitting memorial in this tribute of parental love, and its influence is perpetuated for lasting beneficence in alleviating the ailments of suffering children.

The Merrit A. Wilbur pavilion was formally dedicated and opened in June, 1890. This completed the several departments urgently needed by the institution. There are now lacking another ward for men, with a special apartment for the treatment of fever cases, and a pathological department. When these two shall have been added, you will have the satisfaction—gentlemen of the Board of Trustees—of showing to philanthropists who are interested in such work one of the best planned, best built and most complete little hospitals that can be found in the whole United States.

The important point is, however, whether the institution has accomplished, during these ten years, results commensurate with the generosity bestowed upon it and equal to its appointments. I beg you will follow me in a few statistics.

During the ten years 3,757 patients have been treated in the hospital, and 10,794 patients were treated in the dispensary department. The total number of days of treatment in the hospital for ten years was 96,632. The total number of visits to the dispensary was 37,173. Combining the total number of days in the hospital and the total number of visits to the dispensary would represent the equivalent number of individuals the hospital has treated during ten years—namely, 133,805.

This has cost the hospital $157,854.70. This includes *all* the expense of the institution except building operations and interest on indebtedness.

Since 1885 the hospital, by the kind assistance of the Ladies' Aid Society, has maintained the Training School for Nurses. For several years the Ladies' Aid Society has been engaged in raising a separate fund for the Training School, with the idea of providing a separate endowment sufficient to meet all the expenses of the school. This fund is growing year by year, but is not yet sufficient to meet the expense of the school. This expense in the main falls upon the general expense account of the hospital. The figures representing the expenditures of the last ten years given above, therefore, include *all* the expense of the Training School since its establishment, nearly seven years ago. So that in computing the pro rata expense, it must be borne in mind that the *hospital, dispensary, and training school* are included in this sum of total expenditure, viz., $157,854.70. The average *daily* cost for running this whole establishment during these ten years has been ($42.95) forty-two dollars and ninety-five cents. Taking the sum of the whole number of days in the hospital, and the whole number of visits to the dispensary as a proper co-efficient, would give a daily per capita average cost of $1.17. Or, computing it only for the patients actually treated in the wards would give an average per capita cost of $1.62 a day.

Not reckoning the cases admitted in hopeless conditions, the average mortality has been 4.41 per cent. There have been 1,370 surgical operations performed, with an average mortality rate after operation of 2.54 per cent.

Besides this the hospital has educated and graduated twenty-three nurses.

A comparison of the foregoing figures with those of other hospitals, I think, will leave no ground for regret over the system established ten years ago at St. Luke's. There is no egotism about this result, it is simply the working out of the theory that a hospital which is especially for the cure or relief of sick people ought, *in all its departments*, to be under the control of a single responsible man whose profession it is to treat the sick; that is to say, under a *physician*. This system was established by business men, and has been worked out in a business manner—that is all.

In modern times a hospital conveys a dual significance, viz.: 1st. A place established for the treatment of the sick; and 2d. A place where knowledge concerning the sick should be gathered and disseminated. So that nowadays an institution of this kind is doing but half its proper work when it denies itself or is denied the privilege of disseminating technical knowledge. Study the history of any well-known and flourishing hospital and it will almost surely be found that its greatest success and reputation has followed the establishment of an opportunity for medical education. This is undoubtedly a *propter*, and not merely a *post hoc*. A teacher, in order to be efficient, must himself be a student. Medical teachers, furthermore, must not only study books, they must of necessity also closely study and learn to discriminate with reference to physical, physiological and pathological phenomena. This naturally broadens their knowledge and usefulness as practitioners. As educators, therefore, they are made much more efficient as practitioners, and a twofold good results to the institution with which they may be connected. A properly efficient hospital should always have its school.

Medicine as practiced to-day is divided into three distinct branches, and has three classes of practitioners, namely: 1st, The Specialist, or Consultant; 2d, The Family Physician; and 3d, The Trained Nurse. Modern society is unable to do without any of the three. The proper education of the members of these several classes is, therefore, a matter of the utmost importance, and the institution that undertakes the educational work of any of the three classes, does a most necessary and important function. St. Luke's Hospital has begun by undertaking the education of nurses; and since the school was established the hospital has steadily advanced in usefulness and reputation.

The question of proper education for nurses is a somewhat vexed one, on account of the different conceptions of what a trained nurse really ought to be. If we admit, as we surely must sooner or later, that a trained nurse belongs to a class of medical practitioners, and that her functions are distinctly scientific, running in parallel lines, but differing from those of a physician, I think the matter may be cleared up somewhat by determining what *ought* to be the relation of an educated nurse to the physician in charge of a case. Let us adopt for the moment, as an illustration, the idea that life is an ocean and that each individual is a ship or vessel riding this wind-tossed and storm-beaten sea. When a storm is actually encountered or a dangerous coast is near, a pilot—the physician—is summoned to take charge of the ship; the pilot in turn places an experienced and qualified steersman—the nurse—at the wheel. The pilot gives certain definite instructions to this steersman as to the course, the point of compass by which to steer or what stars to follow. He feels sure that the wheelsman understands full well the management of the wheel, the resistance of the vessel, and the indications for changing the course one or more degrees as directed, as well as the reading of the compass or running by dead reckoning when necessary. The wheelsman should understand just as well that he is only to follow strictly to the letter the directions given by the pilot. If while the master is taking necessary rest some unforeseen event should occur, he must at once be summoned, the matter made clear, and fresh directions be given. In short, the man at the wheel is the executant, the pilot is the director and is responsible for the safety of the ship. Anything arising which menaces the vessel must be made known to him, and the necessary orders for meeting the danger proceed from him. In order to perform his function properly, the wheelsman must understand the construction of the ship, and especially the steering apparatus; he must know much about the ocean's currents and waves; he must understand something about navigation, and be able to read the stars, as well as to know how to "box the compass;" and, finally, he must understand the indications of a fresh outbreak of the storm, and know the sound of nearing breakers.

I believe, then, that a nurse's education should be fundamentally identical with that of a physician. I mean by that, that she must be well indoctrinated in what are called the *elements* of medical knowledge. She should know human anatomy and physiology thoroughly; she must understand not only the influences which affect the working of the human machine, but also how to minimize or counteract these effects; that is to say, she must be a good hygienist. She must know the fundamental symptoms of diseases and how to estimate their severity. It is not absolutely necessary for her to be able to differentiate between two diseases; there are, however, certain phenomena common to all diseases, and symptoms belonging to all dangerous physiological or pathological conditions, and these she must know and be able properly to estimate. She must also be equipped to meet the sudden accidents, or so-called *emergencies*, incident to human kind, and be trained to act with quick and accurate skill to obviate the consequential danger. Of the *armamentarium medicum* she must understand enough to fully realize that it is an extremely dangerous matter for her to attempt to use its agents without direction. As a physiologist and hygienist she must fully appreciate the importance of proper nutrition and should be thoroughly taught, and know herself how to prepare varieties of food necessary for the sick, and be able always to know whether the food served is of the proper quality and quantity for the patient of whom she may have charge. Especially must a nurse nowadays understand what surgical cleanliness means, the means of obtaining as nearly absolute cleanliness as possible, and the influences which favor infection or microbic invasions generally. The modern theory of disease is that it is, almost without exception, the result of microbic infection. A nurse's duty requires her to know the modern means of destroying germs, and how to prevent their multiplication, and by this means prevent the spread of diseases.

This is a long catalogue of necessary acquirements, Young Ladies of the Training School, but you will some day know that it is not too long nor too full. Indeed, in a few years it must be extended. Medicine is progressing, and as educated nurses you must keep pace with your branch of the profession. Besides all this acquired knowledge there are certain innate qualities without which all this will be well-nigh useless to you. Nurses, as well as poets, "*are born, not made.*" Alert, quick, painstaking, vigilant and untiring you *must* be, and even more. A nurse should possess a degree of *finesse* and conscientiousness which never fails, a sense of duty which impels her to discharge with the same diligence and care the menial and so-called small affairs which belong to the care of the sick as the large and conspicuous ones. It is comparatively easy to perform the duties which will be seen or which will be required by the physician, but there are a thousand little things which add to the comfort and general well-being of a patient, which the physician may not think to require and which are not seen by the family nor perhaps even by the patient; it is the punctual and careful performance of these small offices that shows a good nurse. Were I to put in one sentence, the best advice I could possibly give a nurse as a guide in all her work, I should say: *Above all things, do not despise little things, and discharge the smallest detail and most menial task with the utmost care and vigilance.* It is the neglect of small things which is the bane of humanity, and that which makes only partial success or failure!

It is a law in sociology that supply and demand must regulate compensation. The ranks of trained nurses are being rapidly increased, and competition is very sharp now amongst nurses. It must necessarily follow that compensation for the services of nurses must be lessened to increase the demand, or else that the supply of nurses be diminished to keep up the scale. We know that instead of any prospect of diminution fresh provisions are being constantly made for the education of nurses, and that the yearly increase is becoming larger every year. This must of a necessity drive the poor and indifferent nurses out of the profession or reduce the scale of compensation far below the present rate. You will have to face this alternative very soon after leaving your school. At first, perhaps, the reputation of the school may serve to find employment and proper compensation for a nurse, but when finally its fostering care is removed, the nurse must stand or fall according to her own individuality. Remember that axiom of success: "There is always room at the top." In order to have permanent success you must make yourselves *worthy* of the good fortune. People are always willing to pay more for expert counsel, or a specialist's advice; they will be just as surely willing to pay well for a superior nurse.

The idea of pecuniary success is, after all, young ladies, not the proper standard nor desire for a nurse. Those of you who enter the profession with the hope of becoming rich will be wofully mistaken, and had much better leave the ranks at once. If you are successful, you will earn your "living," nothing more. Your true and best reward will be the consciousness of having performed arduous duties in the best possible manner, and as the duties all appertain to the bettering of the condition of your fellow-man, the nobler idea of reward will be the accomplishment of the greatest good to every individual under your charge. This involves great self-denial and much self-restraint. In order, therefore, to rise to the zenith of your profession it is absolutely necessary that you have an absorbing love for the work.

Associated, as you will be, with mankind in states of mental weakness and disquietude proportionate always with the physical weakness and distress, great drains will be made upon your moral strength and courage, and self-reliance. Here will be your greatest trial. You must adapt yourselves to each individual and must meet every phase of his mental vicissitudes. In order to do this, your feminine intuition will stand you in good stead; but intuition alone will not suffice, you must know human nature and must yourselves be mentally strong. In a nurse's life and nature there is no place for frivolity and idle sentimentality. When human flesh is on the rack and the tortured mind cries aloud for help and succor, a very pillar of strength and an answering mind, strong, reliant and never-failing, must be at hand; it is you who must furnish these. Your professional life will furnish infinite opportunity for the cultivation of this strength, and I am sure in the stillness of the night-watches, when you sum up the profit derived from your work, you will feel that, after all, the reward you will prize and cherish will be the "well done" your mind whispers to your soul. It will be *strength*, ever strength of mind and soul you will require, and your true aim should be the acquirement of this strength. Your success will be nothing if you have not this; your reward will be infinite if you have.

This, then, is the true object of your training. Do not fancy for a moment that your professional education means simply the *drawing out* of your memory, or the storing up of a mass of facts and figures. It means rather the acquirement of these in *order* that you may be able to comprehend the greatness of your work, and your training ought to consist in the *use* of this knowledge in order to develop the *latent* strength which is so essential in your profession. All this is to equip you for your real work—the study and comprehension of your fellow-man, and the adaptation of all proper means for alleviating his sufferings. Study your patients individually, and learn to discriminate. It is as dangerous and foolish for a nurse to try to manage every patient after the same manner, as it is for a physician to attempt to treat every disease with the same remedy.

The advantage of a hospital training is, therefore, obvious. A large number of individuals come under observation and are presented for study. First, under direction, the nurse is sent to do certain offices for these individuals. Her work is criticized or approved by nurses of greater experience. The opportunities of personal service increase, they multiply, and become more complex as the term of service proceeds. Absolute obedience to orders is the first lesson taught. Exactitude in the performance of the orders is required; regularity of ministration is inculcated, and systematic records must be kept. The nurse advances and is permitted to do more responsible work; she is put in charge of a ward and becomes personally responsible for the care of a number of patients. She is then a teacher and directs other nurses. She is a disciplinarian, and preserves order and sees that rules are carried out. Finally, she is allowed to go out, and with totally changed environment, and widely varying surroundings, to assume individual responsibility for cases in private practice. In this course there appear all the essentials for proper training. Sufficient opportunity is given for the study of individuals and individual ailments. The value of command is appreciated by the tacit obedience that has been rendered and required; exactitude, regularity and system, and the habit of recording, have been learned; new ideas, thoughts and just criticisms have been excited by the teaching which has been required, and self-command and self-reliance ought to have been developed by the responsibility which has been given and required. If a nurse fails, it is therefore her own fault. It is well for you to think of this, young ladies, while you are yet in training. You are going to succeed or fail according as you use your present opportunities. Your teachers may influence and instruct you, perhaps, but your real *education* must depend upon your individual selves, and this means that it all depends upon what use you make of the material which is offered to you here for the "drawing out" of your potentialities. If you have no latencies, no potentialities for this work, better, far better, that you give it up at once. You will never succeed in any true sense of the word. With the light you have already acquired search diligently yourselves and discover whether you truly desire to be a nurse, and whether you love the work better than all else besides. Believe me, a nurse "is born, not made!"

Young Ladies of the Graduating Class—you have entered a profession, and the most exacting of all professions—the medical profession. Have you ever thought what it means to belong to a *profession?* It implies the acceptance and subscription to certain tenets, certain rules and certain methods. In entering the medical profession you oblige yourselves to regard the rules of that profession. In the olden days it was the custom of the neophyte to formally subscribe to a certain oath, called the Hippocratic oath, before he was admitted into the profession. This excellent confession of medical faith contained certain clauses which every conscientious man and woman must *always* regard, and though now an unwritten law, should be considered just as binding as in former days, and a few, at least, of its tenets should be inviolable. One of these—and I charge you solemnly to regard it, is—the personal affairs, the ailments and the idiosyncrasies of a patient must be considered more sacred than those of your own selves. Sometime ago, in asking about a certain nurse who had succeeded another one in the nursing of a patient, I was told: "Oh, she is doing well, and they like her so much, *she is so professional!*" "So professional!" The expression struck me at once, and I immediately tried to discover what this meant as compared with the conduct of the first nurse. They were both trained nurses. I found out that the first nurse had been in the habit of kissing her patient (a *lady patient*) occasionally, that she had gossiped about former patients and their ailments, and the physicians for whom she had nursed, and had talked about other nurses and their conduct in such and such a case. She also made a great show of her records of the case, and great pretensions as to her own ideas with reference to the case, and so on. While liked by the family and esteemed a good nurse by the patient, they felt that something was wrong about the nurse's conduct, but they could not tell just what. When the second nurse came however, and attended strictly to business, treating her patient with all kindness, but without any familiarity, helpful and always alert to the affairs which belonged to her position, it was discovered that a nurse could be "*professional*," and that was what was wanting in the first one.

The medical is a dignified profession. As I said a little while ago, there is no place in the profession of nursing for a trifler or frivolous person. It is an intensely earnest profession. Unbending and recreation are not only proper, they are necessary for a nurse, but duty brooks neither the one nor the other. You will be estimated and valued according as you esteem your own dignity. Be "professional" therefore, and beware of levity.

You occupy to-day a most interesting position. The terms of Bunyan's grand old allegory are particularly appropriate to you and your situation, and, indeed, to the nurse's career generally. You have been admitted at the "Narrow Gate," have passed through the "Slough of Despond," and, though deviating now and then, have nevertheless, with your "burden," reached the Interpreter's House. You have been shown the several chambers, had the several mysteries of these chambers explained to you, have been counseled as to your future way, and have been warned of the dangers that still beset the path. You have been regaled, and to-day you set out on your further journey. Be very sure you earnestly ask for Great Heart to guide you; for the "Valley of Humiliation," "Doubting Castle," "Vanity Fair"—yes, and the "Valley of the Shadow of Death"—are before you. Will you reach the "Delectable Mountains" and the "Land of Beulah?" God knows. Is there amongst you one "Much Afraid," one "Faint Heart," or one "Ready to Halt?" Do not give up. Beware of "Giant Despair," and his wife "Diffidence." Turn not aside for an easy path, but toil up the Hill of Difficulty; for do you not remember that the house Beautiful is just beyond!

As members of the medical profession you have continually to deal with that mysterious something we call *life*. The conservation and preservation of life—that is your mission. "The Highest cannot be spoken of in words," said Gœthe, "and probably the ultimate secret of the universe is beyond either our powers of conceiving or expressing." A recent writer on this great subject has borrowed from the East a conception and grafted upon it modern thought and Christian philosophy, and it seems to me to sum up, as nearly as we can think, a proper conception of life. "Why or how or whence life comes to us we do not know now, but the transcendent miracle is ever before our eyes; infinitely rich and free, life is filling, thrilling, surcharging every molecule of matter to which with wondrous power and ingenuity it can gain access. . . . Just as matter and force are indestructible, various forms of force being interchangeable, so must it be with life. There must be a conservatism of life energy, just as rigid, and this truth must remake and remould the whole conception of immortality. When mechanical force disappears in one phase, it at once reappears in another aspect. So vegetable, animal and mental life are but different aspects of life force, and suffer no loss when transformed one into the other, or when the body disappears altogether. And, as it is the inherent nature of force never to rest, so there is no rest for life."

Take this conception of life with you in your work, and, as the same writer truly says, "Every day you have a hundred opportunities to give, without lessening your own supply, some of your own life, to increase the quantity and to elevate the quality of the general stock of the world's life."

Act out your mission as true women, and medical women; "Help the young; they inherit the world, and will use it well or ill according to your teaching and example. Stop cruelty to animals; they are your brothers, filled with the same life as your own. Discourage war and intemperance, and lessen the tyranny of the strong and wealthy. Wage a ceaseless war to the death against luxury, the poison that is eating and rotting the hearts of all of us. Love trees, meadows, clear brooks, the mountains and silences of nature. Love not so much your own or another's individual life as life itself."

THE KINGS COUNTY MEDICAL ASSOCIATION.

The January meeting of this Society will be occupied by a paper by Dr. F. C. Raynor, on "Report of a Case of Laryngeal Growth," and one by Dr. W. H. Biggam on "Appendicitis."

PLACENTAL SITE AND CORPUS LUTEUM.

Dr. J. H. Raymond reports that in three autopsies which he has witnessed, in which death occurred immediately after confinement, he has observed that the site of the placenta was on the side of the uterus opposite to the ovary in which the corpus luteum of pregnancy was found. In two instances the corpus luteum was in the left ovary and the placenta was attached to the right side of the uterus; in the third instance, the attachment was on the left side and the corpus luteum was in the right ovary. If others have made similar observations we should be glad to receive a report from them, and would request those who may hereafter have opportunity to investigate the subject further to communicate to us the results.

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EDITORIAL.

NEW YORK JOURNAL OF GYNÆCOLOGY AND OBSTETRICS.

The first number of this monthly journal appeared in November. It is edited by Drs. A. H. Buckmaster and J. D. Emmet, aided by the following collaborators: Drs. T. A. Emmet, T. G. Thomas, A. J. C. Skene, Charles Jewett, W. H. Baker, E. C. Dudley, H. A. Kelly and J. C. Reeve.

With such a staff the journal cannot but be a success, and we extend to its editors a cordial welcome into the ranks of medical journalism. We predict that there will be no occasion for the "indulgence" on the part of any of the journal's "contemporaries," asked for by its editors, but that the "ladder of experience" upon which the first steps have just been taken will be so rapidly mounted to its very summit that some of us, who are now higher up and are looking down, will soon be turning our gaze in an upward direction, and even endangering the continuity of our cervical vertebræ in the act.

FATHERS OF MEDICINE.

During the past year we have been able to present to our readers twenty-four of the finest illustrations of these ancient worthies that have ever appeared in a medical journal, illustrating the principal epochs in the history of medicine from the time of Æsculapius to that of Jenner. For these types of the photo-engraver's art, and for the admirable sketches which accompany them, we are indebted to Dr. Joseph H. Hunt, a former member of the Editorial Committee, and for many years the Librarian of the Medical Society of the County of Kings, under whose care and direction the library made greater progress than in all the decades which preceded his incumbency. We take great pleasure in announcing that Dr. Hunt will, during the current year, contribute to the JOURNAL two illustrations each month, still continuing to illustrate the history of ancient medicine, with the portraits of some of the heroes who were omitted in our last year's effort to cover the whole period, to the beginning of the nineteenth century.

Next year we hope to illustrate the medical history of Brooklyn, with portraits of the ex-presidents of the Medical Society of the County of Kings.

DIRECTORY FOR NURSES.

The recent attempt to murder the wife of a demented patient by the male nurse employed to care for him, emphasizes not only the importance, but the necessity, for Directories, the managers of which shall be held responsible for the character of those whom they send out to nurse the sick. It seems hardly possible that such a villain as the one to whom we refer could ever have obtained recommendations from reputable physicians, which would have procured for him registration in a directory for nurses such as is maintained by the Medical Society of the County of Kings at its rooms, 356 Bridge Street. It is true that the character of all applicants for registration cannot be always fully known, and that black sheep will be found in every flock; still the probability of securing the services of a scamp in the capacity of a nurse is greatly diminished by having recourse to an organization, the very object of which is to investigate the character of all who seek its privileges. The duty of physicians who become sponsors for nurses is also brought into prominence by this occurrence. It is a serious matter to certify to the good character of a nurse, and unless the physician who is called upon for such a recommendation knows the fact, he should carefully avoid making the statement of it. Fortunately these remarks apply only to male nurses, as we have never heard of any of the other sex proving recreant to the trust imposed in them. It seems to us that the lesson to be learned from the history of this crime is that physicians who are in need of nurses for the care of their patients should procure them from the directories, as by so doing they not only insure their patients and their patients' families from possible injury, but they at the same time relieve themselves of what may prove an awful responsibility.

WATER FAMINE.

Never before the present season has Brooklyn been in imminent danger of a water famine. That a continuance, for a few more days, of the condition which prevailed on Monday and Tuesday, November 22 and 23, would have seriously imperilled the public health there can be no question. The sanitary condition of the water-closets and other fixtures in many houses was of a most offensive character, and had not relief come when it did, disease must inevitably have resulted. The rain which fell on Monday afternoon was a godsend to many a household. Throughout the city roof-leaders were disconnected, and the rain-water was collected in kitchen boilers, pails and vessels of all kinds and descriptions. The demand for Hygeia water was so great that many druggists could not supply their customers. Even Vichy and Apollinaris were used for washing purposes.

The cause of the break in the conduit is still a matter of doubt. The contractors claim that it was due to an original defect in its construction, while the public in general believe that had the earth which was removed from the trench in which the new main is being laid not been thrown upon the conduit, this original defect would never have manifested itself. The city authorities promise a rigid investigation into the whole subject, and criticism should be withheld until the official report is made. But when the facts are all known and the responsibility is located, punishment of no doubtful or uncertain nature should promptly follow.

LEGISLATION TO PREVENT DRUNKENNESS AMONG PHYSICIANS.

It will doubtless be remembered by our readers that the legislature of Georgia recently passed a bill to punish with a fine physicians or prescription clerks "who may become drunk while they are offering their professional services to the public or in actual service." In vetoing this bill the Governor expresses his hearty concurrence in any legislation which would prevent such persons from practicing either medicine or pharmacy, but sees no reason why they should be fined to the exclusion of others whose duties may be important and responsible.

We believe that drunkards, or even those who, although not deserving of this appellation, still allow themselves occasionally to become degraded to a state lower than the beasts, should be deprived of their right to assume any responsibility in which the life, the rights or the welfare of others is at stake, and the principle should be carried beyond the learned and other professions, and acted on in a broad and comprehensive manner. A physician whose moral nature is so far perverted as to allow him to assume the duties of his profession when in a state of intoxication would not be much affected by a fine.

REGENTS' EXAMINATION.

In the Regents' Examination which was held in September to determine whether would-be medical students possessed sufficient elementary knowledge to begin the study of medicine, the following task was set in English Composition: "Write a letter, consisting of at least six sentences, giving directions to a patient in the care of himself during convalescence." We submit that the knowledge necessary to comply with this direction is not of an elementary kind; indeed we know of nothing which calls for the exercise of better judgment or which demands a greater experience than to be able to advise one who is recovering from an attack of sickness just what he should do and what he should avoid. Then, too, directions to a patient convalescent from a disease of the respiratory organs would vary greatly from those which would be applicable to one who had recently suffered from a disease of the digestive apparatus. The Examiner has unconsciously perhaps, but not the less truly, imposed upon a set of young men who know nothing of medicine, and less of hygiene, a task which would be no easy one for a full-fledged doctor, and one which even such an one could not intelligently answer without more data than are furnished him in the Regents' papers.

PROGRESS IN MEDICINE.

It gives us great pleasure to be able to announce to our readers that the important department of Progress in Medicine will be continued during the present year under the direction of the same experts as have contributed to it during the year just past, with the exception of Mr. Sidney V. Lowell, who retires from the staff.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the rooms of the Society, 356 Bridge Street, on Tuesday evening, November 17, 1891, at 8 o'clock.

Dr. West in the chair.

There were about 100 members present.

The minutes of the October meeting were read and approved.

The Council reported favorably upon the applications of Drs. Joseph Wesley Malone, Anthony J. Berger, Frank S. Millbury and Burr B. Mosher, and recommended that they be elected to membership.

The following applications for membership were presented:

Dr. James Wood, 162 St. John's Place, Bellevue Med. Coll., 1891; proposed by Dr. Wm. C. Braislin; Dr. Wm. M. Hutchinson.

Dr. Daniel Waldo, 1051 Third Avenue, Coll. Physicians and Surgeons, N. Y., 1878; proposed by Dr. Geo. Chaffee; Dr. Wm. M. Hutchinson.

Dr. Frances Peele, 131 Berkeley Place, University of Michigan, 1888; proposed by Drs. J. H. Raymond and Geo. McNaughton.

Dr. Rupert S. Royce, 343 Franklin Avenue, University of Vermont, 1889; proposed by Dr. Jos. H. Hunt; Dr. Wm. M. Hutchinson.

The following applicants having been favorably reported upon by Council were declared elected to membership:

Drs. Peter V. Burnett, Silas G. Blaisdell, William A. Meyers, Walter O'Brien, Addison L. Coville, Oscar Embden, James B. Warden, Jos. A. Livingston, and John O. Polak.

SCIENTIFIC BUSINESS.

Report of the Surgical Committee.—The subject, "The Ultimate Results of Operations for Removal of the Uterus or Its Appendages," was opened by the chairman of the committee, Dr. Pilcher, who was followed by Dr. Howard A. Kelly, of Johns Hopkins Hospital, Baltimore, with a paper on the same subject. Drs. Matthew D. Field, of New York, Skene, Palmer, Jones and Chase took part in the discussion.

A vote of thanks was tendered to the guests of the evening, Drs. Kelly and Field.

On motion, the meeting adjourned.

W. M. Hutchinson,
Secretary.

BROOKLYN GYNÆCOLOGICAL SOCIETY.

At a meeting of the Brooklyn Gynæcological Society, held June 6, 1891, Dr. O. A. Gordon read a paper entitled "Ptyalism of Pregnancy, with the Report of a Case" (*vede* present number of Journal). After the discussion, the following cases were narrated:

NARRATION OF CASES.

VOMITING OF PREGNANCY.

Dr. Emery.—I should like to know if any of the members here have succeeded in controlling the vomiting of pregnancy?

Dr. F. Baldwin.—Has Dr. Emery tried Dr. Jewett's plan of gently dilating the os with the finger?

Dr. Emery.—I think that is applicable when the os is small, but in the case I have reference to I could easily introduce my index finger to some distance beyond the os. I recollect some years ago I had a case of retroflexion where almost everything failed, and the dilatation of the os in that case did certainly seem to help the vomiting and control it.

INVERSION OF UTERUS.

Dr. Gordon.—I have a few notes of what is to me an interesting case of inversion of the uterus that occurred in my practice recently. The patient was a primipara, twenty-six years of age. Labor began at 2 A.M., and the first stage was completed at about 8 A.M. From that time the pains were rather infrequent and not very strong. At 2.30 P.M. I applied the forceps and delivered in about ten minutes, using traction during the pains as far as I could. I delivered the placenta by compression and very slight traction on the cord. It came away intact, and everything seemed all right until I felt for the uterus above the pubes, when, to my horror, I failed to find it. I passed my hand into the vagina and there found the inverted organ. There was quite a free hæmorrhage, and the patient, now recovering from the chloroform, complained of considerable pain. I made pressure on the depended fundus and pushed it into place and held my hand in the uterine cavity until I thought it well contracted, but upon withdrawing my hand I found the uterus again inverted. This occurred a second and a third time, after which I injected a hot one-per-cent. carbolic solution, still holding my hand in the uterine cavity until firm contraction had been secured and maintained for several minutes. The perinæum required four sutures. I used antiseptic precautions as far as possible, and up to to-day (the tenth day) the temperature has not reached 100° F. Digital examination shows the uterus in good condition, and the lacerated perinæum well united.

Dr. Dickinson.—Was the placenta already peeled off before you noticed the inversion?

Dr. Gordon.—Yes.

Q.—Was the uterus completely inverted through the cervix?

A.—Yes.

Q.—Did you restore it as a whole, pushing the whole mass back into the uterus?

A.—I made pressure by grasping the fundus, and counter-pressure above, and pushed it up.

Q.—Were you not struck with the ease with which it could be done?

A.—I found less difficulty in restoring it than in preventing its reinversion.

Dr. Dickinson.—In a recent case which came under my notice, which has not yet been reported, in a young, vigorous primipara, where a muscular and clumsy operator made a vigorous expressio fœtus to deliver the placenta, the uterus hung out between the thighs with the placenta attached, and repeated efforts were made to replace it as a whole. When I arrived I found the method of Noeggerath was surprisingly easy. Beginning at the thinnest part of the uterine wall—the location of the Fallopian tube—make a dent with the coned fingers, follow that dent up until the Fallopian tube is carried back into the inverted cervix, pass a hand down on the flabby abdominal wall, dilating the cervix with these fingers, and so replace the uterus in a somewhat lop-sided way. A hot douche and iodoform in the cavity complete the treatment. The patient made a good recovery without a rise of temperature. She had bled to such an extent as to be in a condition of syncope for nearly half an hour. The point that surprised me about that case was the great facility of replacing the uterus.

Dr. Chase.—It is a noticeable fact, gentlemen, in these two cases reported, that the inversion followed an effort on the part of the attendant to deliver the placenta after Credé's method. It is not to be presumed that Dr. Gordon made any undue pressure in that method of expressing the placenta, and while there is no certainty that this procedure was responsible for what happened in this case, it is an open question whether undue stimulation of the circular fibres of the uterus, particularly at the fundus, was not the important factor in causing the inversion. I believe the method of Credé in general practice should be used with a good deal of caution. Those who have had long experience in obstetric practice know that in a very considerable percentage of women in labor, after the birth of the child, the uterus is exquisitely tender, and I regard it little less than cruel under those circumstances to express the placenta from the uterus. I think it is far more rational, after making gentle pressure and waiting a proper time, to introduce the hand carefully and remove it. No rule can be formulated as to time; the judgment of the accoucheur must decide in every case. It may be five or fifty minutes. With your hand inside the uterus you know precisely what you are doing; you are able to determine the point of attachment of the placenta, and use as much force as necessary to separate it, and no more.

Dr. DICKINSON.—May I ask Dr. Chase what he is going to do with such facts as these: There have now been thousands of cases delivered without any introduction of the hand into the vagina or uterus, no vaginal examination being made. In these cases the mortality has been astonishingly low, beyond comparison with any results heretofore obtained.

Dr. RAYMOND.—By Credé's method?

Dr. DICKINSON.—The point is that the hand not having been introduced into the uterus, germs swarming at the entrance of the vagina (and which are not found in the fornix and cervix) are not carried into the uterus.

Dr. CHASE.—That there are advantages in delivering the placenta without the introduction of the hand I think there is no question, but that the risk is greatly enhanced by it does not seem to me demonstrated. It is not to be presumed that any obstetrician will introduce his hand into the uterus unless it is altogether aseptic. I would like to know if it is not the experience of the gentlemen present that Credé's method of delivering the placenta is not oftentimes attended with a great deal of pain?

Dr. RAYMOND.—Is not your patient ordinarily under chloroform at that time?

Dr. CHASE.—I venture to say that the majority of patients are not delivered in that manner.

Dr. McNaughton.—Is not the introduction of the hand into the uterus more painful than making pressure on the outside?

Dr. Chase.—In certain cases it might be, but when the parts are so exquisitely tender there is less pain in introducing the hand, probably less than expressing the placenta by force.

CREDÉ'S METHOD.

At the request of the chair, Dr. Dickinson gave the following explanation of Credé's method:

After four or five pains, begin to supplement the contractions of the uterus by firm pressure on the fundus, grasping the uterus between the fingers of the hand slipped behind it, the ball of the thumb placed in front. If necessary use two hands, and carry the uterus into the hollow of the iliac fossa, pressing it somewhat, but not violently, downward. Continue the pressure for the length of an ordinary pain, and then let up until the uterus contracts again; keep up gentle friction of the fundus between the grasping motions.

I think that is the original Credé. It has been modified in teaching, I think, to this degree: half an hour's delay, keeping the hand on the uterus and keeping up gentle friction; then the Credé method for half an hour; and if that fails, go in after the placenta.

Dr. Gordon.—How long a time on the average before the placenta is delivered by slight compression or traction?

A.—The books say twenty to thirty minutes. The followers of Credé in Germany follow the expectant treatment. I quote Germany on account of the large number of cases. Ahlfeld, I think, waits an hour or two hours, or six hours if necessary; and I think his average wait is from an hour to an hour and a half—the expectant treatment, simply gentle friction.

Dr. Gordon.—I think most of our patients would call in another physician if we waited that length of time. It has been my experience in the majority of cases that the placenta would deliver within fifteen to twenty minutes, and I seldom make firm pressure, but slight friction and slight pressure.

I do not approve of Dr. Chase's views in regard to introducing the hand into the uterus. I do not believe in general practice there is one obstetrician out of twenty that has clean hands. Dr. Chase would be perfectly safe in doing that, but I would not want the majority of practitioners to introduce their hands into the uterus for me.

Dr. Chase.—I apprehend, gentlemen, that the necessity of introducing the hand into the uterus is of *rare occurrence;* that gentle friction is valuable, and that some degree of force is admissible in stimulating normal contraction of the uterus. I think experience shows that in certain instances there is a degree of abnormal adhesion of the placenta which makes one of two things needful, either very strong external pressure, or gentle manual separation of the placenta. I have seen quite a number of placentas that were removed manually and with some difficulty, and if they had been left to Credé's method, I venture to say that great force must of necessity have been used. The better method, if possible, is already suggested, to give nature time to assert herself, and by the contraction of the uterus itself thereby loosening the placenta in a normal manner.

Dr. Raymond.—There is an interesting question that suggests itself at this point: What proportion of cases require chloroform and are delivered under chloroform. I rather judge from the remark of Dr. Chase that it is the exception for him to use chloroform in his deliveries.

Dr. Chase.—I think until within the last twenty years the use of chloroform in obstetric practice has been very small indeed. I suppose I use more or less chloroform in about 70 per cent. of the cases of labor which I attend; but I very often do not use it until near the termination of the second stage, and perhaps then to no great extent. I very rarely use instruments without giving chloroform.

Dr. Raymond.—I made that inquiry because I thought it bore very strongly on the point you made as to pain. If the majority of patients are under chloroform at the time Credé's method is used, that objection would not hold, whereas if they were not, it would be a strong point.

Dr. Chase.—There are two points: one, that of suffering to the patient, and the other, the risk of traumatism.

Dr. Gordon.—It has been my custom to use chloroform at the close of the second stage in almost all cases; but the anæsthesia is only momentary, and ends before the placenta is delivered.

EPITHELIOMA OF CERVIX AND VAGINA.

Dr. Raymond.—I might speak of a case I saw this week, which was of a good deal of interest. The patient was a woman 55 years of age, looking remarkably strong and well, giving a history of having been confined twelve months ago, and was still nursing the child. Eight months after the cessation of the lochia, what she supposed was the menstrual flow returned again, and has continued up to the present time. With the exception of the flow there is nothing remarkable in her history, only some slight hypogastric pain. The flow was not offensive, she said, and yet, when an examination was made, the whole anterior vaginal wall down to about the junction of the urethra with the bladder was a mass of epithelioma or sarcoma. It struck me as a rapid case, and I wondered if the disease could have developed after the delivery of the child. There was nothing in the history to lead one to suspect any such trouble until four months ago. There was some hypogastric uneasiness, but it hardly amounted to severe pain, and there was as frequent urination. The lesion involved the whole of the cervix, and it felt like a cervix that was the subject of a very large laceration. It seemed to me like one of those cases sometimes spoken of in which a laceration is the beginning of the degeneration. The anterior vaginal wall was hard and infiltrated, and portions of it were almost cartilaginous in hardness, but the cervix itself was breaking down very rapidly.

IMPACTED FIBROID.

I had another very interesting case during the past week of impacted fibroid, which could not be relieved. The patient was a colored woman, giving what, to me, was a rather unique history, and yet I am inclined to think, perhaps if I were more familiar with the history of the colored race in the South it would not be so unique as I thought. She was 34 years old. Of course we all know that the age of these Southern colored women is always a matter of doubt, but her sister, a well-educated woman—a school teacher—came with her. The evidence seemed reliable that she had been married at the age of 11 years, and had given birth to her first child at the age of 12. When she was 25 she became a grandmother. About four years ago she was examined by a physician who told her she had a small subperitoneal fibroid on the posterior wall of the uterus. This had evidently been increasing in size, and another one had developed, and the uterus had become retroverted, and when I saw her she was suffering from inability to retain the urine, difficulty in defecation and severe pain. On examination of the uterus fibroids were found filling the pelvis, and although the uterus seemed mobile, it could not be raised above the promontory of the sacrum. Repeated attempts, under an anæsthetic, were made to relieve the impaction, but failed, except that there was an increase in mobility, and it looked at one time as though persistent treatment might succeed in raising the uterus above the promontory of the sacrum and give room for the fibroids to grow. That has not yet taken place, however, though two attempts have been made.

EPITHELIOMA OF CERVIX.

Dr. Emery.—A similar case of epithelioma came under my observation some three or four years ago. The woman had no idea that she had anything the matter with her. She came over on the steamer Umbria, and that vessel suffered from a severe blow from a tidal wave, and great fright prevailed throughout the ship. Very shortly after that she had a flow, though she had supposed she had passed the term of life by several years. She came to me to inquire if anything was the matter with her. I made an examination, and found quite a large mass involving the cervix, accompanied by considerable infiltration of the anterior vaginal wall. She seemed to date everything from the time of the accident on board ship. The hæmorrhage continued for some time, and finally the cervix was amputated, and she died later on with the return of the disease, I think, though, the case is quite peculiar in some respects. She seemed to have an idea, from her own examinations, that it could not have been prior to the accident, and it was not more than three months afterward when I examined her.

Dr. L. G. Baldwin.—I saw, only last week, a case which I examined for admission to St. Peter's Hospital, with a history of having been confined only five months previous, and no special trouble at the time of labor. The cervix and fundus were so much involved that I told the husband that nothing could be done for her less than a hysterectomy, and that would probably relieve her for only a few months.

Dr. Chase.—There must have been a specific involvement of those parts prior to the labor, or else the onset of the malignant disease was exceedingly rapid.

Dr. Dickinson.—A child may be delivered through a cervix or vagina that is extensively diseased. The succulence and softening of the parts that occur during the last months of gestation will admit of a large sized child passing through a cervix that is thickened as wide as three fingers, and which is involved all the way up, as I have seen at post-mortems.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M. D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

NITROGEN MONOXIDE AND OXYGEN FOR ANÆSTHESIA IN MINOR SURGICAL OPERATIONS.

Van Arsdale. (The American Journal of the Medical Sciences, August, 1891.) The author, in a paper read before the New York Surgical Society enumerates the disadvantages in the employment of pure oxygen monoxide or laughing gas and of mixtures of this agent with air for the production of surgical anæsthesia. The statement made in some physiological text-books that mixtures of nitrous oxide and oxygen may be inhaled with impunity for any length of time is likewise shown to require modification before it can be clinically and experimentally verified. If anæsthesia, once induced, is to be maintained for any considerable length of time, this can only be achieved by admitting air in greater or smaller quantities into the lungs. This repeatedly postpones complete asphyxia, but requires, on the part of the administrator an amount of skill, in order to keep the patient between the two evils of complete cessation of respiration and the awakening to consciousness with the return of reflex motions and struggling, not practically attainable.

After a number of experiments the author finally devised a mixture containing 10 parts of oxygen to 90 of nitrous oxide. In order to obtain the full anæsthetic effect of this mixture the ordinary reservoir rubber bag of the dentists was made use of, the pressure of which, in forcing the gas into the lungs was increased by placing the bag between the jaws of a large wooden clamp. Even with this, the results were not always satisfactory, but, if the ideal anæsthetic is ever to be discovered, it will probably be through just such carefully conducted trials as those described in the paper quoted.

ARTIFICIAL HERNIÆ.

J. Wábleusky, (Centralblatt für Chirurgie, 1891. No. 40). The author's position as a Russian military surgeon gave him the opportunity of examining a large number of conscripts. He was struck by the frequent occurrence of inguinal in this class. In all cases there was found, at the site of the external ring, a large roundish oval or triangular opening with a median base and a lateral point. Through this opening two fingers could be easily passed into the abdominal cavity. The identity of the appearances in these cases aroused his suspicion, and a number of experiments were made upon the cadaver, with the result of producing an exactly similar condition by passing a blunt instrument into the inguinal canal and executing a rapid and energetic lifting movement.

LOCAL ANÆSTHESIA BY THE COMBINED USE OF ETHER AND COCAINE.

Schleith. (Deutsche medicinal Zeitung, 1891, No. 44.) The intracutaneous injections of cocaine, which are painful and, therefore, infrequently used, may be improved upon by following S.'s method of first spraying the part for half a minute with ether. Following this, a greater area can be rendered insensitive by the cocaine. Incisions 12 cms. in length may be made, solutions of from 1 to 3 per cent. of cocaine only being employed. If the parts to be operated upon are deeply situated, the tissues to be separated must be alternately treated with ether and cocaine, as the return to sensibility becomes apparent. In this way S. performed minor resections and other operations upon bone quite painlessly.

STRANGULATED HERNIA.

Jules Marin. Treatment of Strangulated Hernia (Gangrenous) by means of Enterectomy, followed by Longitudinal Enterorrhaphy. Paris, J. B. Baillière & Son, 1891. The results of the treatment of gangrenous hernia are as yet unsatisfactory, and every attempt therefore at improvement in the technique is worthy of attention. The author suggests an improved procedure, describing a method used in some cases by his teachers, Chaput and Duchamp. He advocates primary resection and suture of the bowels and is opposed to the establishment of an artificial anus. The essential point of the procedure employed by Chaput is the immediate removal of the spur occurring in the establishment of an artificial anus, by primary longitudinal incision and suturing. After circular resection of the gangrenous portion, with or without cuneiform excision of the mesentery, the ends of the bowel are placed side by side. In each a longitudinal incision of from 6 to 8 centimetres is made, at from 1 to 2 centimetres from the mesenteric insertion. The four edges of the two slits are sutured so that both lumina of the bowel communicate freely. After this suturing—longitudinal enterorrhaphy—both ends form a kind of pair of trousers whose upper broad opening still remains to be closed. The closure may be effected completely or a small gap may be left as a kind of safety valve, its edges being sutured to the hernial sac. In the latter case, preferred by Chaput and Duchamp, the fistulous openings close rapidly owing to the absence of a spur,—or are easily closed by freshening the edges and suturing. In three cases operated upon, the partly sutured bowel was permitted to remain in the canal. The disadvantages of this were shown in the second case operated upon by Duchamp. The symptoms of strangulation did not cease, although a catheter introduced through the fistula into the upper end of the bowel brought away fæcal matter, and an artificial anus developed ; the latter was closed by a subsequent operation. The persistence of the symptoms of obstruction of the bowels was found to be due to the length of the narrow hernia canal, and the pressure exerted upon the walls of the bowels in the canal. Marin, therefore, recommends reposition of the completely sutured bowel, —or, in the case of a long inguinal canal, a greater longitudinal incision than 8 centimetres. The first patient operated upon by Duchamp recovered, the small fistulous opening closing spontaneously. The results of the second case have already been mentioned. In Chaput's case, the cure of an artificial anus was attempted by this method. The patient, a feeble individual, died two days after the operation. Post-mortem examination did not reveal any cause of death ; no peritonitis existed. The value of the new method can only be decided by further experience.

THE EXTIRPATION OF CARBUNCLE.

Riedel. (Deutsche med. Wochenschrift, 1891. No. 27.) In the treatment of carbuncle by deep incisions, the tedious course of healing, the danger of gangrene and renewed infection, as well as the deforming cicatrix which remains, has led Riedel, since 1883, to perform immediate extirpation in these cases. For this purpose he makes a circular incision surrounding the involved skin and from several points on this incision others radiate toward the healthy skin. In this way at least four flaps are formed by dissecting the skin from the surrounding infiltration. Turning back the skin flaps, the dissection is carried deeply until the facia of the muscle is reached. Then the infiltration is loosened from the facial, and the separation of the carbuncle is accomplished. The hemorrhage, usually copious, is arrested by compression and packing. The temperature as a rule becomes normal on the evening following. On the next day, the swollen flaps approach each other,—leaving a central opening through which pass the secretions. Riedel claims the following advantages for his method :

1st. A dangerous, inflammatory focus is removed; a comparatively harmless loss of skin and connective tissue only resulting. 2d. Arrest of progress of local as well as any general infection. 3d. Very slight loss of sound skin. 4th. Rapid healing. 5th. Non-deforming cicatrix.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,

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Hospital, Brooklyn.

PUERPERAL PSYCHOSES.

Olshausen (Zeitschr. f. Geb. u. Gyn., B. xxi., H. 2). The pathology and etiology of the puerperal psychoses are still obscure. Most obstetricians attach little etiological importance to psychical influences such as fear, shame, sorrow and anxiety. Martin Schmidt thinks the causes are to be found in the somatic effects of childbirth and child-bed, the pain and strain of prolonged labor, blood loss, debility and loss of weight (which in normal child-bed is one-twelfth the body weight). Fehling and Arnot lay great stress on psychopathic predisposition. That the foregoing somatic together with psychical influences and hereditary tendency are competent causes of the psychoses of child-bed the author grants, but there are numerous cases in which the origin of the disease is clearly attributable to infection. Spiegelberg thought such cases should be regarded as mere fever delirium. Winckel also looks upon puerperal mania occurring in connection with septic infection as symptomatic delirium. Most monographs and systematic treatises on puerperal mania do not allude to its relation to sepsis. Yet Holm found inflammatory processes in about one-fourth of all psychically ill women. Campbell-Clark out of forty cases found ten with inflammation of the uterus and eight with septicæmia. Leidesdorf divides the puerperal psychoses into three groups, in the last of which the disease develops within five to eight days after labor and is to be regarded as a toxæmia. Of forty-nine cases collected by Hansen forty-two he thought clearly attributable to infection. The forms of infection which are most frequently responsible for the psychoses of child-bed in the author's experience are pyæmia and ulcerative endocarditis, less frequently pure septicæmia.

Besides the septic psychoses and those due to purely psychical causes, there is a third class occurring after eclampsia. The author found that puerperal insanity followed eclampsia in thirty-one out of 515 collected cases, or about six per cent.

IMPORTANCE AND TREATMENT OF RETENTION OF MEMBRANES AFTER LABOR.

Velitz (Nouv. Arch. d'Obstet. et de Gyn., No. 6, 1891). In 4333 cases V. has observed retention of portions of the membranes in 288 (5.21 per cent.), complete absence of the chorion in 51 (1.17 per cent.), with hæmorrhage in 16 (31.3 per cent.), retention of small fragments of the chorion in 35 (27.8 per cent.), with hæmorrhage almost uniformly.

Extraction of the retained membranes was practiced 81 times with a resulting morbidity of 44.4 per cent. and no mortality. Membranes were retained in the cervix and extracted by the hand in 26 cases, with a morbidity of 22.9 per cent. Retained membranes were expelled spontaneously during child-bed in 48, with a morbidity of 60 per cent.

Total morbidity of the clinic, 18.62 per cent.

Morbidity after artificial delivery of the membranes, 46.4 per cent.

Morbidity after extraction of the membranes from the uterus, 44.4 per cent.

Morbidity after extraction from the vagina or cervix, 22.9 per cent.

Morbidity after spontaneous expulsion, 60 per cent.

Conclusions.—1. The uterus should not be entered for the removal of retained membranes except in case of an absolute indication, such as hæmorrhage from inertia.

2. In case the membranes or portions thereof are wanting, a vaginal examination should be made and the *débris* hanging from the cervix removed with the fingers or forceps. If nothing is found in the vagina or cervix and there is no hæmorrhage, leave the expulsion to Nature.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

THE INFLUENCE OF IMPERFECT DEVELOPMENT OF THE GENERATIVE ORGANS AS A CAUSE OF DISEASE.

Wylie. (Annals Gyn. and Pæd., Oct., 1891.) Attention is called to the influence of imperfect development of the generative organs in causing much of the disease peculiar to women. Many cases of endometritis, causing dysmenorrhœa and sterility, of flexion and displacement, have for their prime etiological factor faulty development. The same remote cause must be kept in view, also, in many cases of ruptured cervix, subinvolution and other post-partum conditions.

The ovaries, also, may be imperfectly developed, causing abnormal ovulation and reflex nervous symptoms. Doubtless the marked modern tendency to force mental development at the period the girl changes to woman, with the restriction of physical exercise and out-of-door life, is responsible for much of this lack of development of the generative organs, a tendency more marked in America than in Europe.

To insure full development at this period, a girl should have a surplus of nerve and physical force. If this is expended in mental and emotional strain, the generative organs will fail to develop so that their functions will be normally performed.

When menstruation appears it is apt to be irregular and painful; leucorrhœa is common; and if an examination is made, often an infantile, anteflexed uterus will be found, with such a disease of the glands and follicles as to cause the state of granular erosion which the older men treated as ulceration.

Bad hygienic surroundings, a serious illness, or any other cause which brings about an anæmic or weak condition during this period, is pretty sure to result in imperfectly-formed generative organs. Leucorrhœa is usually the first local symptom, and dysmenorrhœa is common. Unless marriage, which tends to stimulate development, takes place early in life, the changes induced by catarrhal endometritis are quite sure to result in sterility. If pregnancy occurs, the os being hard and incapable of much distention, a laceration is apt to result. The diseased glands prevent healing, involution is delayed, the increased weight and relaxed ligaments favoring displacements. The feeble condition of the tissues makes sepsis more likely to follow labor or abortions, and bring about conditions favorable to the development of new growths.

Having this primary pathological condition in mind, the treatment of these cases will be more rationally conducted.

During the period of active development let there be more healthful out-of-door play. The brain can be developed a little later.

When we find the small uterus with semi-raw os and contracted canal, our aim should be to cure the local disease of the glands and follicles and stimulate the organ to development. If pregnancy, however, takes place in such a uterus, bring on premature labor if indicated, to prevent lacerations. A few days after labor use cotton pledgets saturated with boro-glyceride, placed so that the uterus cannot be displaced downward and forward. These should be removed after twenty-four to forty-eight hours and the vagina washed out with a solution of hot water and borax, and the process repeated every third or fourth day until involution is complete.

This rarely fails to relieve all local symptoms, and enables the patient to be about after the first week or ten days.

[The proposition to induce premature labor to prevent laceration of the cervix will challenge criticism, and is not likely to be adopted by conservative obstetricians unless actual experience demonstrates its utility and safety.—W. B. C.]

PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital.

TREATMENT OF THE MORPHINE HABIT.

A. Fromme (Wiesbaden) in a monograph on this subject describes the condition as a disease which is both physical and mental in its character. He states that the mental exhilaration which results when the practice of taking the drug is commenced, is later on seldom attained.

The principle on which a cure depends is withdrawal of the drug. Three methods are described:

1. Sudden.
2. Modified rapid.
3. Slow.

The first is strongly condemned by the author. It can be accomplished in a short time, but is not devoid of danger. There is a great amount of suffering caused, mental and physical, by this method. The patient necessarily becomes a prisoner, so strict must his seclusion be. The amount of mental anguish caused by the sudden withdrawal of the drug is not infrequently the forerunner of certain nervous diseases. The absence of the stimulating and sustaining effect of the drug may cause a dangerous prostration. Again, under this method patients are apt to resort to the drug.

The *modified rapid plan* of treatment requires from one to three weeks. The reduction of the amount of the drug taken commences on the third day, and by the sixth day only a fractional part of a grain is taken. By this method the patient also suffers. Fever, bodily pains, vomiting, diarrhœa, and restlessness may be present. Prostration has also to be guarded against.

The author does not believe this to be the best method of treatment. The element of time is the only favorable feature.

The third method of treatment requires from two to six weeks. The longer the duration of the "habit" the longer the time for its cure.

The patient to be treated is first considered in his general condition. His mental state and his physical strength are studied for a few days. Relations of a confidential character are desirable between patient and physician. The condition of the cardiac muscle is noted and any indication of weakness is given the appropriate treatment.

Up to the fifth day the morphia is taken as usual. Reduction then commences. This reduction may be of a twofold character: of the amount, and of the number of the doses.

The taking of the drug during the night is omitted, and the number of the day doses grows less. At any time, however, should the suffering of the patient become severe, as from a neuralgic attack, there is no hesitation in giving a larger dose.

In certain cases a diminution of less than one-third of a grain cannot be attained.

Two important factors in the treatment are mentioned. They certainly deserve emphasis. In order that the patient may become free from the drug there must be:

1. Absence of mental excitement.
2. Perfect rest.

The necessity of these can at once be appreciated, and they show how impossible it is for the treatment to be carried on in other than special institutions.

The use of tobacco during the treatment is not recommended.

The third step in the treatment consists in the withdrawal of the minimum dose. As an aid other remedies are given to take the place of the morphia. Cocaine has been used. The author has seen no marked benefit. Codeine, henbane, hyoscyamine, methylal, coffee have been given. Care must be taken not to use these in such amount that a "habit" is formed. The use must be discontinued before the patient is discharged from the care of the physician.

There are certain special conditions which during the cure may require treatment. For the *insomnia* the cold douche, codeine, cocaine, antipyrin (hypodermically), chloral hydrate, amyl hydrate, chloralamid, paraldehyde, somnal, sulfonal may be used; *constipation* may be treated by cocaine (five-sixth of a grain hypodermically); for the *nausea* seidlitz powder, or ether in capsules may be given.

The spring is the most favorable season for perfecting the cure.

The use of alcohol, especially for producing sleep, is forbidden.

The patient is cured when the pathological results of the morphia are removed; and when his mental condition is such that he is cognizant of the dangerous effects of the drug.

STERTOR AND APOPLEXY.

Bowles (Folkestone) in a reprint, with additions, of a paper printed some years ago, has recorded many interesting cases where stertorous breathing was present.

Stertor is a term the author gives to modifications of breathing consisting of sounds produced in the air passages. There is always mechanical interference which prevents the due entry of air. This interference bears a relation to the unconscious state of the patient.

Three anatomical conditions are mentioned as being present in cases of unconsciousness, any one of which may act as the cause of the stertorous breathing:

1. Paralysis of the soft palate.
2. Falling of the tongue back in the throat.
3. Mucus in the pharynx and air passages.

From a study of the cases presented it would seem that the first two causes were closely related and generally present. The third may or may not be present, depending somewhat on local conditions.

In the cases which are recorded, and all of which came under the author's observation, the patient was found in an unconscious condition with well-marked stertorous breathing. With a single exception the patients were always lying on the back. The symptoms of carbonic acid poisoning were frequently present.

In these cases the author believed that the stertor had a distinct relation to the interference with the entry of air. The back of the mouth, by the changes mentioned above, was closed. Any means allowing air to enter would relieve the breathing.

It can be readily seen that by removing the tongue from too close contact with the posterior pharyngeal wall, a direct communication would be opened. This the author effected in these cases *by placing the patient on the side.* The tongue falls away from the pharynx and the stertor ceases. In certain of the cases where the contents of the stomach had been thrown upward, and in others where there was much mucus in the air passages, the relief was very striking.

A case of infantile convulsion is recorded where a change to the lateral position was followed by cessation of the spasms.

This means of stopping stertor is a most valuable one. It gives relief to the anxiety of the friends at what seems a most distressing condition and lessens the danger from poisoning by carbonic acid. In cases of apoplexy it is well therefore to remember the simple rule: *Place the patient on the side.*

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PATHOLOGY.

BY JOSHUA M. VAN COTT, JR., M.D.,

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ON THE QUESTION OF BLOOD FORMATION IN LEUKÆMIA..

E. Wertheim (Zeitschrift f. Heilkunde, xii., 1891). W.'s experiments lay in two directions. He examined partly blood from embryos in fresh abortions of various months of intra-uterine life, and partly the blood of fourteen leukæmic patients. The first series of experiments confirmed the old teachings of Kölliker. He found that in human embryos the red and white cells originate from a common hæmoglobin free mother-cell, which multiplied by typical karyokinesis.

The leukæmic cases were, with one exception, lineal-medullary leukæmia, and this was a case of lymphatic leukæmia. In all of these cases, with the exception of the last one, karyokinesis was present in the circulating blood. The author also found the mononuclear hæmoglobin free mother-cells, and observed their transformation into red as well as white blood corpuscles. These mother-cells began to divide themselves by karyokinesis. Toward the end of the karyokinesis he observed three series of further development:

a. The daughter skeins return to the condition of the mother-cell.

b. The daughter skeins step forth newly into karyokinesis.

c. The daughter skeins convert themselves into nucleated red blood corpuscles. In further course the nucleated red blood corpuscles pass over into non-nucleated red blood corpuscles. The nucleated red blood corpuscles form consequently the normal intermediate forms between the hæmoglobin free mother-cells and the non-nucleated cells. Just how the non-nucleated red corpuscles are formed from the nucleated red corpuscles, the author was unable to determine.

The numberless circulating mitoses in leukæmic blood prove, according to W., that increased blood formation exists in this disease.

The process is one of increased new-building of the colorless mother-cells, and the "unbuilding" of the same into white and red blood corpuscles, in the blood-forming organs. This process, however, is unequally carried out, so that there are proportionally very many more white corpuscles formed than red. Always at first, and because of the increased blood formation, the number of red corpuscles is sufficient, so that pure anæmia is not present in the beginning of the leukæmia.

The case of lymphatic leukæmia differed absolutely from the other thirteen cases, in that no nucleated red blood corpuscles, no karyokinesis, no small mononuclear white blood cells, and but few polynuclear leucocytes were found.

THE KOCH INSTITUTE FOR INFECTIOUS DISEASES IN BERLIN.

P. Böttger (Centralblat f. die med. Wissenschaft, No 38, 1891). B. describes the new institute as follows:

"The institute is divided into a hospital and laboratory. The former is built on the strip of ground between the old Charité Hospital and the city railroad. The poor quality of the land for heavy building purposes made it necessary, in order to obtain perfect separation of the different wards from each other, to erect a series of lightly-constructed barracks, which also permitted plenty of light and air, and were a sufficient distance apart and stood in correct direction regarding the heavens.

These comprise in all thirteen buildings, *i. e.*, one administration building, seven ward buildings, two living buildings for the help, a disinfection and section room, a coal and ice room.

Collectively the wards contain 108 beds. They conform to three varieties of ground plan: two hold, irrespective of other necessary furnishings, only a large room with eighteen beds each; two a room for fourteen beds, and two separate of two beds each: three each, two long rooms for six beds each, formed by an unbroken central partition running the length of the building.

For the proportioning of the size of the wards, a surface measure of nine square metres and cubic measure of forty cubic metres for each bed is allowed.

The barracks comprise tightly closed rooms with inner and outer gyps-deal coverings. The space between the inner and outer woodwork is left free, and moisture is guarded against by ample seaming with "carbolineum."

The depth of the buildings in their relation to the surrounding streets and the necessity for sufficient "fall" to the sewer pipes required deep cellars, into which the sewer pipes and other tubing and the fresh air chambers are built.

The internal arrangements of these barracks are of the most modern and approved pattern.

Lighting is secured by means of incandescent electric lamps, supplied with electricity from the Berlin Electric Light Co.

The principal building (for reception and selection of patients) contains on the ground floor a waiting room, official rooms, a room for the separation of charitable donations of food, an auditorium with sixty seats and small adjoining rooms. On the upper floor over the forward part of the building are living apartments for the doctors and preserving rooms.

"The disinfection and autopsy building contains four rooms. In the first the wash is sorted, in the second brought into the disinfector, which is fastened into the unbroken wall between the second and third rooms. The disinfector is a Henneberg's apparatus of the third type and latest construction. In order to pass into the third room in which the disinfected wash is removed from the oven, the servant must pass through the fourth room, a bath room, where he bathes and changes his clothes.

"There is also a room provided for disinfection of refuse food.

"Gardens surround the hospital barracks.

"The scientific building is separated from the hospital by the Unterbaum Street. It is triangular, and arranged in a manner similar to the Charité buildings. An inner court serves for living purposes.

"The large number of small well-lighted rooms in an unbroken row are exceedingly convenient for the proposed purpose (scientific laboratories for single individuals).

"The cellar contains rooms for servants, space for animals, and also electric and water meter, etc. On the ground floor living apartments for the inspector, portier, three assistant physicians, an under physician, an apothecary, and numerous servants, and finally space for animals under experiment, and an incinerating room.

"The first floor above contains the most important rooms of the scientific building, *i. e.*, the workroom of the director (Prof. Koch), together with a large incubating room, rooms for the managers of the scientific division, another incubation room, and numerous private laboratories for practitioners.

"On the second floor above is a room for the representative of the clinical division, who also undertakes the chemical work, rooms for library, photomicrography, collections, and laboratories. The working rooms are of best construction. The incubating room is of particular interest, and is closed in material of poorest heat-conducting properties: double deal filled with chaff. It can be lighted with incandescent lights. Heat is supplied on the plan of Pasteur Institute by warm water, regulated with electricity."

[With such provisions, it is scarcely to be wondered at that our Teutonic confrères produce such brilliant discoveries.

Why are not such means for pathological-clinical investigation possible in America?—V. C.]

PATHOGENESIS OF THE DYSENTERY AMŒBA.

Kartulis (Alexandria), (Centralblatt f. Bacteriologie u. Parasitemkunde, 1891, No. 11) found in all cases of pure dysentery and dysenteric liver abscess the dysenteric amœba, but never in hundreds of cases of other intestinal affections. He succeeded in finding a nourishing medium in sterilized decoctions of fresh straw in which the amœba grew rapidly, while at the same time the bacteria present grew very slowly.

From fresh evacuations a few drops of mucus are mixed with the straw decoction in small flasks, and left open in a temperature of 30–38°. On the second day a film covers the surface of the culture-fluid containing young amœba, "swarms," later outgrown pseudo-podiæ, on the fourth and fifth days living spores, which multiply from eight to eleven days. For further cultivation, the straw decoction must be strengthened with small quantities of neutral or slightly alkaline bouillon. Spores remained germinative in this way for months. Efforts to obtain these amœba pure did not succeed. Only once were the amœba obtained in pure culture after three dilutions from a dysenteric liver abscess. Control experiments with stools of healthy or simple diarrhœa patients failed to produce the parasite. Cats were mostly used for experiment. Feeding of animals with the amœba or its spores never produced these in the stools. Other animals were injected, after ascertaining carefully that their intestines contained none of the parasite, into the rectum with: 1. Fresh fæcal matter from dysenteric stools containing amœba. 2. Straw decoction cultures of the parasite. 3. Pure cultures of the same from pus from a hepatic abscess.

In some cases, after ejection of the liquid, he closed completely the anus with catgut sutures. The animals died with varying rapidity, having active diarrhœa, the stools being full of amœba. The large intestine showed varying degrees of inflammation, hæmorrhage and erosion, but never ulceration.

Hardened and stained sections of the diseased mucous membrane contained the parasite between the pushed-up epithelia of the follicles and villi.

Since in the control experiments with cultivations of bacteria from the dysenteric stools, and with fluid of dysenteric stools containing amœba which had been filtered, he failed to get dysentery, the author believes the amœba to be the pathogenic organism responsible for the production of dysentery. He further believes his proof will be conclusive when he finds the protozoa in water.

DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

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ETIOLOGY AND TREATMENT OF ATROPHIC RHINITIS.

Jonathan Wright. Atrophic rhinitis is frequently mis-named ozæna. The latter is only a symptom, and is common also to syphilis and caries.

Ozæna cannot exist without the presence of crusts and scales of dried mucus in nasal cavities. In some instances the crusts are difficult to locate; they may be hidden by hypertrophied membrane, and in one case of author's were found only in antrum of Highmore.

Atrophic rhinitis is a disease most often affecting females. It may occur at any age. Ozæna appears most frequent in youth or middle age; it rarely is found in patients over thirty-five or forty years of age. It is not an hereditary complaint. Cause of atrophic rhinitis is contested. It is claimed by some to be a disease presenting an atrophic condition from the beginning; others assert it to be the later stage of a nasal hypertrophy.

Bosworth believes it to be the result of a suppurative rhinitis in childhood, which causes atrophy of glandular epithelium from pressure of dried secretion.

The author doubts this theory because of the rarity of suppurative rhinitis in infancy, unless dependent upon syphilis, presence of a foreign body, disease of accessory sinuses, or some chronic systemic disease.

The inspissated mucus, it would seem, is the result rather than the cause of the atrophic condition.

It is the opinion of the author that atrophic rhinitis is a result of pre-existing hypertrophic conditions. Walt has declared his belief that the Löwenberg coccus is accountable for ozæna. Cultures of it have a characteristic odor, but on inoculation it does not produce atrophic rhinitis.

Since the presence of crusts is very rare in patients over thirty-five years of age, it is probable that there is a natural curative tendency in advanced age; this might be explained by excessive atrophy of mucous glands.

The prognosis for those who are willing to submit to prolonged persistent treatment is as good as in any other chronic ailment. The whole aim of treatment should be: First—To get and keep the nasal mucous membrane free from all sources of irritation. Second—To stimulate the remaining glands sufficiently to compensate in part for those destroyed by pathological processes.

Professional treatment should be given every other day, and this should continue for from four to eight months; after this visits may be less frequent.

The author's method is to gently remove all crusts and mucus possible with cotton-covered probe, and then wash cavities thoroughly with any mild alkaline detergent spray. The following methods for stimulation have been tried:

1. Mechanical: Gottstein's tampons, massage.

2. Electrical: *a.* Galvanism. *b.* Galvano-cautery at dull red heat.

3. Medicated solutions.

The best results have been obtained by applications of medicinal agents.

Aristol, menthol, and thymol have been used, and preference is given to latter after experience of four years.

This formula has been of much service:

℞ Thymol, - - - gr. iss.
Alcohol, - - - -

Glycerin, - - -	aa	ʒ iss.
Aquæ dest., - -	ad.	℥ i.

This may need dilution at first, but should be used in stated strength as soon as it can be tolerated.

In most cases where directions are followed strictly, improvement may be noted in six weeks; that is, odor will be less offensive, crusts will be smaller and less tenacious, and flow of thin mucus will be freer.

Strict attention should be given to general health. The administration of cod-liver oil is especially recommended.

[This article is a valuable addition to the literature of that much-discussed subject, atrophic rhinitis. It is valuable because the statements are based upon strict scientific investigations, histological and bacteriological, as well as upon careful personal experience.

The technique of treatment is accurately given in detail; and the subject is discussed in a logical manner.

The denial of existence of purulent rhinitis in infants, unless dependent upon systemic conditions or presence of foreign body in nose, is open to discussion. We believe, also, to have had good results from use of aristol in solution as a gland stimulant.

It is but very slightly soluble in water, but Schieffelin dissolves forty-eight grains in ounce of benzoinol, and a solution of ten or twelve grains to ounce of albolene can readily be obtained by application of heat. W. F. D.]

THE USE OF COCAINE.

1. Amount of cocaine used must be in proportion to extent of surface it is desired to anæsthetize. In no case should quantity exceed one grain and three-quarters.

2. Cocaine should never be used in cases of heart disease, pulmonary disease, or in persons of highly nervous temperament.

3. In injecting cocaine, the intradermic method is preferable to hypodermic. By injecting into, not under, mucous membrane of skin, the risk of entering blood-vessel is avoided.

4. During injection patient should be always in recumbent position; in operations upon nose and throat the head should not be raised until anæsthesia is complete.

5. It is of great importance that cocaine should be pure, since its combinations with certain other alkalies result in poisonous compounds.

6. When maximum dose used, it should be divided, and small quantities injected at a time—this is often a safeguard against cocaine poisoning. (Magitot, N. Y. Med. Jour.)

CHILDREN AND THEIR DISEASES.

BY FRANCIS H. STUART, A.M., M.D.

THE CHEMISTRY AND CLINICAL VALUE OF STERILIZED MILK.

Of late years a great deal has been written upon the dangers of transmission of infection by means of milk derived from diseased animals, or improperly handled or exposed, and, as a consequence, sterilization has been regarded as a necessity; but the milk, after sterilization, has been found so changed in that process that of late a reaction has set in, and the question has arisen whether or not the desired immunity could not be better attained by some other means. In the "American Journal of the Medical Sciences" for June, 1891, Professor A. R. Leeds and Dr. E. P. Davis contribute a valuable paper as to the nature of the changes effected in milk by sterilization and the clinical value of sterilized milk.

Professor Leeds is well known as an authority on the subject of milk analysis, and his conclusions are extremely interesting and valuable. Dr. Leeds finds that raising the temperature to the boiling point for a lengthened period, as in sterilization, converts a considerable portion of the soluble into insoluble proteids. The effect of heat is the greatest on the galactozymose, the ferment found in raw milk, which has the power of liquefying starch; even raising milk for a moment to the boiling point destroys this ferment action. Experiments made to contrast the behavior of sterilized milk with raw milk, when subjected to the action of rennet, acid, artificial gastric juice, and pancreatic juice, show that the casein, while not coagulated by the heat, is, nevertheless, less readily coagulated by rennet, and yields slowly to the action of pepsin and pancreatin. Moreover, a part of the lactalbumen of the milk is coagulated, although only partially so. Its effect, however, is to thicken the milk and intensify its colloidal (ropy or mucilaginous) character. The fat globules are likewise somewhat affected by the heat, and the coagulated proteid matters attach themselves to the fat globules, and probably have an influence in bringing about the difficulty with which the fat is assimilated.

Finally, milk-sugar, Dr. Leeds finds, is completely destroyed by long-continued heating, and is probably affected to a certain extent during the interval ordinarily allowed for sterilization. Dr. Leeds thus shows that *sterilized milk is less readily and less perfectly digestible than raw milk*, and if sterile milk is sought for, the present desideratum is to obtain it either directly from the animal or by a process not accompanied by such serious drawbacks. Dr. Davis confirms the opinion, which has gradually gained ground, that *while sterilized milk may be useful as a remedy in various bowel complaints, it is not sufficient to sustain life.* If sterilized milk is desired, Dr. Leeds recommends that, after being rendered feebly alkaline with lime-water, the milk should be heated to 155° F. for six minutes; or, still better, the treatment, in alkaline solution, with pancreatin at 155°, followed, if not immediately used, by momentary heating to the boiling point. Either of these procedures, as Dr. Leeds maintains, will render milk sterile without detracting from its digestibility. (Therapeutic Gazette, July 15, 1891.)

INHALATIONS OF OXYGEN BY THE NEW-BORN.

Dr. Bonnaire (Jour. de Méd., June 28, 1891) gives the following as suitable indications for the use of oxygen in the new-born:

1. Whenever there is insufficient pulmonary hæmatosis, either from obstruction of the respiratory passages, or from weak action of the mechanical apparatus of respiration, or from want of excitation of the respiratory nerve-centre, oxygen administration is indicated. Apparent death in the new-born is, therefore, the first indication, though this does not exclude efforts at artificial respiration; besides, oxygen is not always available as soon as required. But if the first dangers of asphyxia have been overcome, and respiration is still ineffectual, or pulmonary disease imminent, with general asthenia, oxygen will be found a valuable resource.

2. Oxygen is also indicated for disorders of the intestinal circulation, of which sclerema in premature infants is one of the most common manifestations.

3. Changes in the blood of infectious origin, like that which takes place in the hæmaturic bronze disease, of which mention is made.

4. Conditions in which there is decided depression of the temperature. Athrepsia, in its acute and chronic forms, is the type of such conditions. (Archives of Pediatrics, Oct., 1891.)

[Attention is called especially to the first indication, for the most frequently occurring cases are those of premature births. In all cases where labor sets in prematurely there is time to procure a supply of oxygen, so as to be prepared for using it in case it is indicated. I have no doubt that many prematurely born children could be saved by a timely, persistent use of this agent.—F. H. S.]

DISEASES OF THE SKIN.

BY SAMUEL SHERWELL, M.D.,

Clinical Professor of Dermatology, Long Island College Hospital; Attending Physician, Brooklyn Hospital; Surgeon to Skin and Throat Department, Brooklyn Eye and Ear Hospital.

ON THE VALUE OF ANTIMONY IN VARIOUS INFLAMMATORY AFFECTIONS OF THE SKIN.

W. Allan Jamieson, M.D., F.R.C.P.E., etc. (British Journal of Dermatology, Sept., 1891). The author mentions writers who before himself have noted good effects of this remedy in various affections of the skin, as Drs. Cheadle and Malcolm Morris in eczema, Jonathan Hutchinson in lichen planus, but thinks the drug on the whole has not met with the consideration among dermatologists generally that it deserves.

He goes on to cite cases in which he claims it to be without doubt the chief factor in improvement if not cure, although he combines many other drugs during its exhibition, which, in our opinion, must somewhat modify conclusions: such as "general exfoliative dermatitis," "dermatitis bullosa," "acute erythematous and moist eczemas," and "lichen planus." He compares its action, or rather says its action is somewhat analogous to that of pilocarpine, both remedies having an action on the sweat glands, and quotes Unna's views of there being a correlation between the functional activity of the sudoriparous glands and the deposition of subcutaneous fat; and says, one can understand how the diaphoretic property of antimony could promote the augmentation of adipose tissue, and simultaneously improve the pliancy and unctuousness of the integument.

HERPES ZOSTER FRONTALIS.

Jonathan Hutchinson, under heading "Notes of Uncommon Cases" (British Med. Jour., July 4, 1891), mentions this, and recalls attention to the fact, not enough noted by the general practitioner, of the tendency, at least, if not absolute constancy, of an affection of the iris of eye, when the oculo-nasal branch of the frontal nerve is affected, which is shown by the appearance of herpetic vesicles or bullæ on the alæ, or far down by side of nose; when, on the contrary, the affection (herpes) is only noted on upper part of bridge of nose, the eye escapes. (This has been often pointed out, and has occurred several times in our practice, but the iritis occurring under the conditions pointed out may be easily mistaken by a non-expert for a syphilitic one, especially when the supra-orbital nerve and its branches are involved, causing what has a slight likeness to the corona. Of course the very acuteness of the lesion is proof against this, but a case with such a diagnosis has been brought to us.) Dr. Hutchinson also insists, in which, of course, he is right also, that it is a nerve affection primarily, with subsequent skin lesions.

THE FIFTEENTH ANNUAL MEETING OF THE AMERICAN DERMATOLOGICAL ASSOCIATION.

This took place at Washington this year, in company with the other associations belonging to the American Congress of Physicians and Surgeons, of which latter this was the second of the Triennial Meetings.

It is safe to affirm that in spite of some drawback, owing to intense heat, etc., there never has been in our land, or in other countries, a more successful or interesting gathering, in view of the work done, etc. This opinion was also held and expressed by the foreign visitors in respect to the other special associations and the general meetings.

Twenty-eight papers in all were read before the Dermatological Section, three of which had distinct relation to Tuberculosis of skin, which were discussed in reference to its clinical aspects and relations, its pathology, and its treatment. The discussions were long, classical, and vigorous. The other papers were monographs on various subjects, and case histories with concomitant observations and remarks, the whole being of a high order of excellence. As before said, it may be doubted if any meeting of dermatologists elsewhere has brought out more practical results. Certainly not so, we believe, in comparing the relative bulk of meetings in those other larger and more unwieldy gatherings, as, for instance, those of the International Congresses. Most of the papers, of which the list is too long to cite here, will appear in the medical periodicals, either special or general.

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PHYSIOLOGY AND EXPERIMENTAL THERAPEUTICS.

BY GEORGE T. KEMP, M.D., PH.D.

THE VOMITING-CENTRE AND THE ACTION OF CERTAIN DRUGS UPON IT.

A new contribution to this subject has been made by Thumas (Ueber das Brechcentrum und über die Wirkung einiger pharmakologischen Mittel auf dasselbe, Virchow's Archiv, 1891, Vol. 123, pp. 44–69).

By a careful method (see original paper) the medulla was exposed and subjected to various incisions. After the animal had recovered from the shock, the effect of drugs on the medulla was tried by applying them directly with a camel's-hair brush.

As the result of a long series of experiments, extending over three years, the author reaches the following conclusions:

The vomiting-centre lies within an area slightly less than five mm. in length by two mm. in breadth, which runs longitudinally under the calamus scriptorius in the deeper layers of the medulla. ("Der Centralapparat für das Erbrechen ungefähr eine 5 mm. Länge und 2 mm. Breite messende[1] Strecke einnimmt, welche nach vom und nach hinten vom Calamus scriptorius und in den tieferen Schichten der Medulla oblongata gelegen ist.")

The vomiting-centre is not the same as the respiratory-centre, for the former may be cut off without stopping respiration.

He attributes the inability which many animals have to vomit to a total lack or an imperfect development of the vomiting-centre.

Concerning the action of drugs, he found that apomorphia and tartrate of emetine (emetinum tartaricum) caused copious vomiting when applied directly to the medullary centre, while tartar-emetic (tartarus stibiatus), zinc sulphate and copper sulphate have no appreciable action on the centre. Tartar emetic appeared to act as a paralyzing or destructive agent to the nerve tissue; for after its application (which caused no emesis) apomorphia, also, was found to produce no effect.

[The author has given a very fair synopsis of the literature on the subject and a discussion of the views of other authorities, but I fail to find that he is acquainted with the work of Mooso, who appears to have shown that tartar-emetic is not without direct action on the vomiting-centre. There is abundance of proof that tartar-emetic, as well as other salts of antimony, when injected into the circulation are eliminated by the stomach. The drift of evidence appears to be that the emesis of tartar-emetic is produced chiefly as a reflex from the stomach, and Mooso has found that when the vagi (the afferent nerves from the stomach to the brain) are intact, tartar-emetic will produce vomiting in smaller doses and in shorter time when given by the mouth than when administered hypodermically. On the other hand, he found that after cutting the vagi (thus destroying the afferent branch of the reflex arc) tartar-emetic required larger doses and a longer time to act when given by the mouth than when given hypodermically, or, in other words, it had to be absorbed before it acted, but it *did act* when so absorbed.

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[1] At this point the original has the following footnote: "In Wirklichkeit ist dieselbe wahrscheinlich noch Kleiner."

This apparently forces on us the conclusion that while the tartar-emetic acts principally on the stomach and produces vomiting reflexly in this way, it will also act directly on the centre if sufficient time be given. Possibly the method of applying it directly to the centre would be found open to the objection of local action on the nerve tissue, either destroying its functional power or preventing its reaching the ganglion cells of the centre. The fact that apomorphia is inert after tartar-emetic has been applied would seem to suggest the former explanation.—K.]

JAMBUL IN DIABETES.

In the June number of the Brooklyn Medical Journal for 1890, there was a review of an article by Graeser, of Bonn, on syzygium jambolanum as a remedy for diabetes. Within the current year two new articles have appeared on the subject, synopses of which have appeared in the "Revue des Sciences Médicales," July, 1891. The following is a translation:

I. Ueber die Behandlung des Diabetes mellitus mit syzygium jambolanum. By S. Lewaschew, "Berliner klinische Wochenschrift," 1891, p. 199.

II. Essai sur la valeur thérapeutique du jambul dans le traitement du diabète sucré. By V. Villy, "Thèse de Paris," 1891.

I. In the cases of several diabetics Lewaschew has employed successfully the seeds of syzygium jambolanum in daily doses of 20 to 40 grammes (ʒ v to ʒ x). Within a few days there was produced in all the patients a notable decrease in the polyuria and other morbid symptoms. The improvement is continued for a certain time after the cessation of the treatment, which is accompanied by no disagreeable effects. These clinical observations are in perfect accord with the experiments of Graeser on dogs rendered diabetic by phloridzin.

II. V. Villy has investigated to find whether this medicine is really able to make glycosuria disappear, and the results which he obtains are not very encouraging.

He states, in general, that jambul is without action upon the polyuria, and that if this medicine in certain cases appears to lessen the quantity of glucose eliminated, it is because the patients are simultaneously put upon a strict diet. The eliminated sugar is not reduced in quantity when the patients are kept on their normal diet. In grave cases where alimentary hygiene is shown to be powerless, all adjuvants, the seed of jambul included, are without efficacy. The doses of powdered seeds administered by Villy varied from 6 to 8 grammes (ʒ iss. to ʒ ij) daily.

[Not having the original paper of Villy at hand, I am unable to say on how large a number of patients his observations were made, or otherwise how widely his researches were conducted. The positive results of Graeser and Lewaschew and the much smaller doses used by Villy leave room for encouragement. The question is now one which will have to be settled by careful clinical observation, and the fact, granted apparently without opposition, that the drug, even in large doses, produces no untoward effects, leaves at least a safe path to valuable observations on this important subject.—K.]

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

THE PHYSICIANS' READY REFERENCE ACCOUNT-BOOK. Arranged by Gideon C. Segur, M.D. Copyright, 1890, by the Plympton Manufacturing Co., Hartford, Ct.

Physicians are notoriously poor business men and poorer book-keepers.

For the physician in active practice to keep his accounts straight seems difficult.

The book before us is designed to simplify our book-keeping and facilitate the keeping of our accounts by an arrangement of ruling the blank pages of an oblong account-book so that they combine the features of a physician's day-book, cash-book and ledger on the same page, thus keeping each patient's account for three years on the same page, with a series of specially arranged pages in the back of the book for short accounts.

The price of this book, arranged for three hundred accounts, is $3.50.

THE MEDICAL NEWS VISITING-LIST FOR 1892, admonishes us that we have not yet procured this necessary adjunct to this year's work.

The binding and paper, with classified blank pages to hold records of all kinds of professional work, with memoranda and accounts, are up to its regular high standard of excellence. The printed matter has been rewritten and brought up to date. Some "dead-wood" has been judiciously omitted, and other parts correspondingly strengthened—noticeably that relating to the examination of urine—to which two pages have been added.

IMPROVED CLINICAL RECORD AND TEMPERATURE CHART. The W. H. Seidel Co., 52 Broadway, N. Y.

In days gone by the difficulties attendant upon the taking of histories and the recording of cases were so great as to practically prevent physicians from making anything but transient notes of their observations. After a hard day's work none but the most enthusiastic had either the spirit or the strength to transcribe in his own handwriting the details of the cases he had that day prescribed for, and, as a consequence, an immense amount of valuable material has been lost to science. To-day, all this is changed. No one can excuse himself from the duty of keeping minute records of his cases on the ground that he has not the time, for there are prepared for him blanks which contain all the details possible to be given, and all that the physician has to do is to fill in a few facts each day, and in cases in which intelligent nurses are employed, even this can be delegated. The Clinical Record before us is very complete, containing sufficient space to chronicle the patient's antecedent history, the cause, mode of invasion, date of seizure, etc., of his present illness, a temperature chart, and all the other important data which a correct history requires to be recorded. The W. H. Seidel Co. present these records without charge, together with a handy pocket visiting-list, to physicians who desire them.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX FOR 1891. Edited by P. W. Williams, M.D. 600 octavo pages. Illustrated. $2.75. E. B. Treat, Publisher, 5 Cooper Union, New York.

The ninth yearly issue of this valuable one-volume reference work is to hand; and it richly deserves and perpetuates the enviable reputation which its predecessors have made, for selection of material, accuracy of statement and great usefulness. Its numerous illustrations—many of which are in colors—make the "Annual" more than ever welcome to the profession, as providing, at a reasonable outlay, the handiest and best résumé of medical progress yet offered.

Part I. comprises the New Remedies, together with a Review of the Therapeutic Progress of the Year.

Part II. is devoted to Special Articles on Diagnosis: the first on Deformities of the Hand, and their Diagnostic value in Nerve Lesions; the second on the Character of the Sputum as an aid to Diagnosis.

Part III. is given to the consideration of New Treatment.

Part IV. is made up of miscellaneous articles, such as Recent Improvements in Sanitation; Concerning Climatology and Hygiene; Alcoholic Inebriety, and the results of Asylum Treatment; Improvements in Pharmacy; Books of the Year, etc.

The arrangement of the work is alphabetical, and is what it claims to be—a recapitulation of the year's progress in medicine, serving to keep the practitioner abreast of the times with reference to the medical literature of the world.

SUGGESTIONS TO THE MEDICAL WITNESS. By J. Wight, M.D. 1891. Pp. 228. Price, $1.00.

In no portion of the field of medical literature has there been so scanty a sowing as in that which is covered by these "Suggestions" of Dr. Wight. We know of no more unenviable position than that occupied by the medical witness who is thoroughly prepared and competent in every respect to instruct the court, the lawyers and the jury; but for the witness who comes to the stand for the first time in his life, for him our very bowels of compassion are opened.

Much has been done of late years by lectures to instruct medical students in colleges and prepare them for the ordeal through which they may be called upon to pass, but little has been done through books to instruct either students or those who entered the profession at a time when medical jurisprudence formed no part of a lecture course. As the author well says in his preface: "When the doctor first begins to testify in court as a medical witness, he has nothing to guide him. He is in a new and strange place, and has assumed new duties. If some one would kindly tell him what to do, and how to do it, a great favor would be conferred, and a lasting debt of gratitude would be incurred." This, the author has attempted to do. That he has succeeded, is evidenced by the testimonials which have been received from judges of the Supreme Court, lawyers, and physicians who are qualified to speak *ex cathedrâ.* The price of the book, barely enough to cover the printing, is so low that every physician and student can well afford to possess it. Indeed, the man who goes into a case as medical witness without the knowledge which it contains, would, while on the stand, give many times its price had he but availed himself of its suggestions.

ESSENTIALS OF NERVOUS DISEASES AND INSANITY. By John C. Shaw, M.D. Philadelphia. W. B. Saunders, 1892. Price, $1.00.

This modest work of Dr. Shaw is becoming so rapidly and favorably known to the profession in Brooklyn that any notice of it must partake rather of the nature of a recognition than of a review.

The author's unusually wide experience in neurological work has enabled him to base the manual on personal observation, and as so many of the forty-eight illustrations are also original, the book can justly be called one of permanent value. The method of indicating the cerebral centres (Fig. 36) and the illustrations of mental cases are surprisingly satisfactory.

As to the thoroughness with which the field is covered, the only wonder is, how can so many subjects, including both nervous and mental disorders, some of them but recently recognized, have been so well treated in the limited space of 194 pages. The purpose of catering also to the wants of students has necessitated this brevity. As we have elsewhere said, this work is not to be judged by any discoverable omissions, but by the correctness and relevancy of what it contains; suffice to say it bears out in this regard the anticipations of those aware of the high professional authority and trustworthiness of its author.

The generous recognition of American work is in marked contrast to its absence in any general sense from a ponderous volume in the same line recently reviewed by the JOURNAL.

The few typos will doubtless be corrected in future editions.

WILLIAM BROWNING.

A TEXT-BOOK OF PHYSIOLOGY. By M. Foster, M.A., M.D., etc. Fourth American from the Fifth English Edition. Pp. 1072. Philadelphia: Lea, Brothers & Co., 1891.

Foster's Physiology has always been one of the standard text-books in the English language. In the present edition we find the same excellence which has been so characteristic of those which have preceded. The work has not only been thoroughly revised by its author, but the American editor has adapted it to the wants of American students. As a book of reference for the practitioner it has few equals; the Human Physiology of Landois and Stirling is, perhaps, more comprehensive; but we imagine there are few points which will not find their elucidation in Foster; and the volume is certainly more convenient to handle, a desideratum not to be lost sight of in these days of large and unwieldy books.

TEXT-BOOK OF HYGIENE: A Comprehensive Treatise on the Principles and Practice of Preventive Medicine from an American Standpoint. By George H. Rohé, M.D. Second Edition. Philadelphia and London. F. A. Davis, Publisher, 1890.

Although this volume is called by the author a "second edition," it has been so thoroughly rewritten and so much has been added as to make it virtually a new book. Dr. Rohé's experience as a practical sanitarian puts at once upon his views the stamp of authority. So many books are written at the present day upon topics with which their authors have but a second-hand knowledge, that we cordially welcome a production which represents the personal experience of its author. Teachers who are desirous of adopting a text-book which shall embody all that is needful for students to know of the science and art of hygiene, need look no further; the book is at their hands. Health officers and physicians will find great profit in its study, and be able to respond more thoroughly to the demands of the public and their clients.

FEVER: Its Pathology and Treatment by Antipyretics. By Hobart Amory Hare, M.D., B.Sc. F. A. Davis, Publisher, 1891. Pp. 166. $1.25.

Antipyrin, antifebrin, thallin, phenacetine and salicylic acid, used to combat fever, have had an extensive use during the past seven years. Their clinical and experimental effects have occupied a prominent place in medical journals. Their importance as antipyretics is recognized, and yet there is not a consensus of opinion as to their relative importance, and they are not sufficiently aged to have attained a precise position, individually, as remedial agents. Dr. Hare's essay, which received the Boylston Prize in 1890, is the first important attempt thus far made to classify the observations on their effects, toxic and remedial, that have been recorded in the journals. To this he has added a series of his personally conducted experiments, with the result of furnishing an orderly statement representing the existing state of knowledge as to the heat-lowering power of these drugs. Their toxic effects are clearly made out, their analgesic properties defined and their power of reducing abnormal temperature asserted. This résumé of Dr. Hare's leaves on the mind the impression, not amounting altogether to a conviction, that no one of these drugs is to be depended on for shortening the course of a continued fever. They, certainly, each in its place, have the property, fairly constantly, of reducing the temperature below the danger point and holding it there. This is an exceedingly important and useful function. It is, however, a little disappointing if this is all, considering the expectations that were excited in the journals some few years ago. The later researches, however, leave it very doubtful if the course of continued fever is shortened materially, if at all, since the advent of the coal-tar products. That there are dangers in their use has been recognized by all careful observers, and this fact is established in this volume. This synopsis of experience with the use of these antipyretics makes it painfully clear that the wise treatment of a case of continued fever is still a complex function and is not to be accomplished by any routine practice of simply giving an antipyretic when there is elevation of temperature. The restoration and maintenance of the several bodily functions and the supplement of waste are, as they were back of the phenols, still the essentials of judicious treatment.

THE COMPARATIVE ANATOMY OF THE DOMESTICATED ANIMALS. By A. Chauveau, M.D., LL.D. Second English Edition, Translated from the Fourth French Edition, by George Flemming, C.B., LL.D., F.R.C.V.S. New York: D. Appleton & Co., 1891.

The first edition of Chauveau's Comparative Anatomy of the Domesticated Animals appeared in France in the year 1854. The author, although indebted to his illustrious predecessors, Cuvier and Geoffroy Saint Hilaire, for the greater part of his material, deserves the credit, nevertheless, of having given, by a judicious selection and classification of previously-observed facts, a decided stimulus to the study of comparative anatomy.

In limiting himself to the consideration of those animals which have become useful companions and servants of man he satisfied the demand of those who sought knowledge for practical purposes only, while at the same time the types of vertebrates described were sufficiently varied to supply valuable information, in an accessible form, to those also who were interested in the subject from a purely scientific standpoint.

Of mammals, solipeds were represented by the horse, the ass, and their hybrid offspring. Ruminants by the ox, the sheep, the goat and the camel; carnivora, by the cat and the dog; rodents, by the rabbit, and pachyderms by the pig.

Of birds, the gallinaceous order was represented by the common fowl, the guinea fowl, the turkey and the pigeon, and palmipeds by the duck and goose.

By selecting the horse as the standard of comparison, the work was made available for use as a text-book in veterinary schools; indeed, to the genius of Chauveau may be attributed, in a great measure, the excellence of these institutions in his native country at the present time.

After the lapse of nearly twenty years, with the collaboration of others, a second edition made its appearance, much improved and enlarged, to which was added the valuable feature of the comparative anatomy of man.

In 1873, the year following the appearance of the above French edition, its translation into our vernacular was accomplished by Mr. George Flemming, of London. For reasons deemed sufficient at the time, the anatomy of the ass, and its cross-breeds with the horse, as well as the anatomy of the camel and of the rabbit, were omitted from the translation.

This book has undergone several reprints since its first appearance, the last being in the year 1889, and has been held in the highest popular esteem, both in England and this country, by those who have made a special study of veterinary science. It has also been accepted as an authority upon the subject of comparative anatomy, generally, so far as it has entered that field.

The appearance of a fourth French edition, published in 1890, has been made the occasion by Mr. Flemming of a complete revision of his work, and this is now introduced to the American reader through the press of D. Appleton & Co., of New York City.

The volume itself has been increased in size from the common to the imperial 8vo, and the enlarged page has been taken advantage of to lift the type a font, the body of the work now being printed in long primer. Much of the matter of special interest to the comparative anatomist, which was formerly printed in very small type, has been raised to that of the principal text, and many obscure headings have been printed in bold relief.

In considering the changes in the subject-matter itself, perhaps the most noticeable feature is the introduction of the comparative anatomy of those animals which were omitted from the first translation. It is scarcely necessary to remark that this renders the work of greater scientific value, especially when attentlon is called to the fact that the rabbit is the sole representative of the family of rodents, and that in the comparison of the mule and the hinny, an opportunity is afforded for studying a very interesting feature of the laws of development. On the other hand, since the hybrid offspring of the horse and ass are so extensively employed in this country as beasts of burden, and the rabbit is made the subject of biological research, the practical worth of the present edition is considerably enhanced by the consideration of their comparative anatomy.

The department of osteology has been thoroughly revised and partly rewritten, while at the same time much new matter has been added. Attention is especially called to the comparative anatomy of various portions of the skeleton, such as the head, thorax, pelvis and extremities, taken as a whole respectively. In myology, also, the nomenclature and arrangement have been so modified as to render the book of greater assistance to those who desire to compare the anatomy of man with that of the lower animals.

The work certainly is, as claimed by the author, more perfectly adapted to the conditions it should fulfil as a text-book and standard work of reference for English-speaking veterinarians. It disposes of the prevalent idea that a translation must of necessity be inferior to the original. For to those reading the French and English languages with equal facility, the English edition is to be preferred. Mr. Flemming has been faithful to the original, besides adding many comments drawn from his observation and experience as veterinary surgeon in the British Army. He has presented the work in better style and has enriched its pages by the judicious selection of many additional illustrations. Finally he has added a copious and complete index (the French edition having none) a *sine qua non* to the busy American.

WM. W. BROWNING, M.D.

CORRESPONDENCE.

GALVANISM IN CORNEAL OPACITIES.

802 North Broad Street, Philadelphia, Oct. 26th, 1891.

To the Editors of the Brooklyn Medical Journal:

I have just received a reprint of an article on "Galvanism in the Treatment of Corneal Opacities"—originally published in the

BROOKLYN MEDICAL JOURNAL by Dr. L. A. W. Alleman—in Dec. 1890.

In this article, Dr. A. asserts the originality of his work as follows: "*The idea of using galvanism for the removal of Corneal Scars first suggested itself to me from noticing the good results obtained by gynæcologists*, &c., &c."

I cannot, late as it is since publication, allow this statement to remain unchallenged.

1st. Is Dr. Alleman ignorant of the history of this subject? There are numerous references to this treatment in literature, I will mention but one. The Annual of the Medical Sciences, 1889, Vol. IV. 13, 81. Granted, however, that he has failed to inform himself of the literature, he is still without excuse for his assertion.

2d. He was several years ago an office student of Dr. L. Webster Fox of this city, *while there, he saw many such cases referred to me for electrical treatment*, and was aware that Dr. F. and myself had been associated in this line of treatment for nearly ten years.

Trusting you will give this an early appearance in your valuable journal, I am,

Very truly yours, GRANVILLE FAUGHT.

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64 Montague Street, November 6, 1891.

To the Editors of the Brooklyn Medical Journal:

The above letter of Doctor Faught's is very surprising. It shows a singular failure to grasp the intent of my paper, and makes an unprovoked attack upon my honesty in the matter, which no hasty reading of the paper will excuse.

I am unwilling to believe that the doctor wishes to appropriate something which does not belong to him, and to substantiate his claim that it was stolen from him, but after a careful reading of his letter, I can make it mean nothing else.

Had the doctor taken the trouble to read my paper understandingly he would have seen that I make no such absurd claim as that the treatment of corneal opacities by galvanism was original with me, but on the contrary distinctly state that,—"Both the galvanic and faradic currents through the closed lids have, I believe, been employed in the treatment of corneal opacities, but have not thus far commanded the confidence of the profession."

From the action of galvanism in other parts of the body, I believed this failure must be due to the method of its employment, and began a series of experiments to test its efficacy, when applied directly to the cornea; the results of which I embodied in the paper. I did not claim originality for the use of galvanism nor for the use of an electrode directly upon the ball, but as far as I was aware this method of treatment had never been applied to corneal opacities.

As to his second statement, I can only say that it is entirely untrue—I never saw a case of corneal opacities referred to him for treatment,—nor did I ever hear from him, or from Doctor Fox, any mention of such treatment.

As this simply leaves the matter a question of veracity between Doctor Faught and myself, and as Doctor Faught is not personally known to you, I herewith enclose you two letters from gentlemen who have been in Doctor Fox's office in the same relation I then occupied, one, for a period of fifteen months, the other, I believe, for nearly a year, in both of which it is stated that during the time of their connection with the office they never knew of any cases of corneal opacity being referred to Dr. Faught for treatment.

I trust this is sufficient answer to his statement that I saw many such cases referred to him for treatment.

Respectfully yours, L. A. W. ALLEMAN.

ACUTE MANIA WITH CATALEPTIC SEIZURE.

Jersey City, Oct. 16, 1891.

Editors Brooklyn Medical Journal:

In reply to your favor of the 15th inst., relative to the case of one B. B., I beg to say that after careful investigation I have ascertained the following facts :

B. B., age 35, colored, porter, good family history, and of good personal habits excepting the last few months, when he has been drinking very heavily. About three weeks ago Doctor ——— was called upon to attend him with delirium tremens. On September 27th he applied to the out-door department of the City Hospital for treatment ; the physician in charge prescribed for him, and he then had the appearance of acute alcoholism, and acknowledged to the doctor that he had been drinking very heavily. On the 28th he was arrested on the street by the police who thought he was crazy, and the following morning the Police Justice committed him to the County Jail to await the action of the County Physician, who when he saw him found that he was suffering with acute mania, due to alcoholism.

He was very violent, ugly, refused to take medicine, and even food for a few days, but gradually improved, until the latter part of last week, when he commenced to take food, and on Monday the 12th inst., he apparently slept all night. He was seen about 9 o'clock on Monday night, when he was perfectly quiet, and again during the night when he was moving around his padded cell, and on Tuesday morning, the 13th inst., one of the under-keepers noticed him standing upright against the cell wall and perfectly quiet, and during the night saw him walking about his cell. About 10 o'clock, he was found lying on his cot, unconscious. About 11 o'clock the County Physician saw him, (and by the way one of our most capable physicians), when he found him cold and without pulse or respiration.

He then gave orders to have him removed to the morgue, when he was placed in a closed box and driven nearly one mile to the morgue, when he was removed from this box and put in the ice-box; but before ice had been applied to him, one of the attendants, as is their custom, examined his eyelids and found that they moved. A physician was sent for, who ordered his removal to the City Hospital. When he arrived there his pupils were normal, respiration slow, pulse 80°, small and thready, temperature was $98\frac{1}{2}$° F., his extremities were cold, and he had no pain. Heat was applied to the extremities, hypodermics of brandy were given, and in a few hours he became sufficiently conscious to recognize what was going on, and to yell when the hypodermics were given him, but he refused to speak otherwise. Yesterday, the 15th inst., he recognized his friends who called upon him, took his nourishment, but still refused to speak; his bowels and kidneys worked freely.

This morning he became extremely violent again upon attempts made to take his temperature and was removed to the County Institution at Snake Hill, where he is now.

It seems to me that this is a case of acute mania due to alcoholism followed by a cataleptic seizure and that the free use of stimulants yesterday has brought on a fresh attack of acute mania.

Yours very truly, WM. PERRY WATSON.

USE OF MILK SUGAR IN INFANT-FEEDING.

Mount Vernon, N. Y., Nov. 3, 1891.

Editors The Brooklyn Medical Journal:

GENTLEMEN:—In your October issue I have read with interest, and profit I hope, "The Report of the Committee on Pediatrics of the Medical Society of the County of Kings." In a report covering a field so vast and important I suppose it is well to be conservative, and, therefore, I do not feel the least aggrieved at the statement that the committee do not coincide with the views expressed by me regarding the use of Milk Sugar in Infant Feeding, but for fear that some one may doubt the *facts* which I presented, I take this opportunity to state that soon after my paper on "The Use of Commercial Milk-Sugar in Infant-Feeding" was read in the Section of Diseases of Children at the annual meeting of the American Medical Association, May 1890, some doubt was expressed by a medical gentleman who is in attendance at one of the large Infant Asylums; I, therefore, asked another physician connected with the same institution to conduct some experiments with milk sugar in the line suggested by my paper, and he very kindly did so for a limited time, giving the so-called Meigs' mixture to ten infants, and shortly he found sugar in the urine of five of these. The fæces were not examined when the experiments were started. I am not at liberty to give the name of this experimenter publicly but will communicate it to the members of the committee who, if they wish, can verify this *fact* and of course draw their own conclusions.

Respectfully, E. F. BBUSH.

AULUS CORNELIUS CELSUS.

"The Medical Cicero." "The most eloquent of all the Latin physicians." Of the personality of this elegant writer we know but little. Even his correct name is a matter of doubt. It is almost universally written Aurelius, though the Aurelians and Cornelians were distinct Roman families of the time of Tiberius, during which Celsus lived.

It is even claimed that he was not a physician but a literary man, a rhetorician, who only wrote on physic as a part of a general encyclopedic work, the other parts of which, having become lost, are only known to us through references from other writers; but it is more probable that he was a practicing physician who wrote well on rhetoric and agriculture, etc., for only with personal knowledge could he have written with so much accuracy and good judgment of medical subjects.

He speaks from personal knowledge, as when describing a particular cure used by Heraclides in adhesion of the eyelids he says: "*Ego sic restitutum neminem memini.*"

Celsus has given us the most perfect account of surgery as it stood at and before his time; and Fabricius refers to him as among the Latins, "*mirabilis in omnibus,*" and places him along with the Grecian, Paulus Ægineta, and the Arabian, Albucasis, as the triumvirate to whom he, after 600 years, principally stands indebted in composing his great book on surgery.

He is said to have accompanied the Emperor Tiberius in the capacity of secretary in his expedition to the East, and he is spoken of by Horace in one of his epistles as making compilations from the library of the Palatine Mount. He is also said to have been intimate with Ovid.

Boerhaave tells us that Celsus is one of the best authors of antiquity for explaining the true meaning and opinions of Hippocrates, and that without him the writings of this father in physic would be often unintelligible, often misunderstood by us.

Dr. Mead also speaks of him in the highest terms and says that he endeavors not only to imitate his sense, but as often as he can his language too, and wishes that he could have done it oftener.

In Celsus's time the materia medica was much enlarged, but his chief excellency lay in the chirurgical part of his writings, much of which is classical in our surgical literature and nomenclature to-day.

For instance, he denominates his chief cutting instrument a "scalpellus." The writer well remembers how his medical teacher would, with rotund eloquence, give the four signs of inflammation in four words terminating with "or," and was gratified to meet a familiar acquaintance in the "sentence," "*Notæ vero inflammationis sunt quatuor, rubor, et tumor cum calore et dolore.*"

Among others of his "sentences," I quote: "We should know that it is nature that performs the cure; art administers the instruments of it."

"The contemplation of nature, though it cannot make a man a physician, may yet render him fitter for the practice of medicine." "*Optime noscens, optime curat*, is a fundamental maxim in the practice of physic."

Space forbids our quoting more, though he devotes a whole book to fractures and dislocations, among which he recognizes and accurately describes the fracture of the skull, which he calls "contra fissure." He describes about thirty diseases of the eye, thirteen of which require manual operation.

The portrait we give this month is from Sprengel's "Aphorisms of Hippocrates and Sentences of Celsus," 8vo, Lond., 1708, besides which, the writer is proud in the possession of the beautiful Aldine edition, "De Medicinæ," of 1528, together with Dr. Grieve's excellent translation, published in London in 1838. **J. H. H.**

THE

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ORIGINAL ARTICLES.

DEFORMITY AFTER EXCISION OF THE KNEE-JOINT.

BY JOHN C. SCHAPPS, M. D.,

Orthopædic Surgeon to St. Mary's General Hospital, Brooklyn.

Read before the American Orthopædic Association, Washington, D. C., September 22d, 1891.

The treatment after excision of the knee-joint is usually passed too lightly over by the commonly accepted authorities on operative surgery. The literature of the subject, with the exception of some recent works on orthopædics, gives the impression that, as in compound fracture, all that is necessary to secure a firm bony support, is a few weeks' immobilization. The two cases here reported are typical of a large class. They serve to show that, on account of the after-treatment, if for no other reason, excision of the knee belongs to the domain of orthopædic, rather than to that of general, surgery. They also illustrate how readily a resulting deformity may be overcome within a liberal margin of time.

Two boys, aged respectively fifteen and seven years, were operated on in St. Mary's Hospital, Brooklyn; one on July 10, 1888, the other on March 12, 1889. In both, the point of insertion of the crucial ligament into the inner surface of the outer condyle appeared to have been the centre of disease. In the younger, an additional small abscess cavity was found at the epiphyseal plane of the tibia. In both cases only a thin slice was removed from each bone, and as the scraped-out abscess cavities were small, the opposing surfaces were but slightly encroached upon. The first sections enabled me to bring the axes of the bones into an almost straight line, and rather than sacrifice any more bone, I permitted a slight amount of flexion. Wyeth's drills served to secure firm coaptation. Hard rubber drains were inserted at the angles of the wounds, and the limbs were immobilized by posterior steel splints. Healing was immediate without suppuration. The drills were removed at the end of four weeks. Two or three weeks later union was apparently firm.

The older boy was discharged ten weeks after the operation, still wearing the steel splint and using crutches. Just how long he continued to use either I cannot be certain. December 2, 1889, eighteen months after the operation, he was readmitted. The limb was remarkably flexed, but there was no motion to be observed on manipulation, and no evidence of bone disease. An osteoclast, after the principle of Rizzoli's, was applied, and by strong effort with a powerful screw the limb was gradually forced into the same position as after excision. The parts about the knee were very elastic. There was no sudden yielding or other evidence of fracture, but repeated applications of the screw finally overcame the resistance, so that the limb remained in the desired position when the force was removed. To overcorrect the slight flexion so that the limb could be put up perfectly straight seemed to require more violence than the soft parts would bear. Plaster of Paris was applied and continued for nearly ten months. During this time, and for a month longer, patient went on crutches. They were gradually discontinued while patient was kept under observation. By January 27, 1891, thirteen months after the application of the osteoclast, and two and a half years after the excision, patient had had no support for three months. Though his weight had markedly increased, the deformity had not reappeared and he was discharged.

The younger patient left the hospital four months after the excision, but through an error the splint was removed. Six months later, or ten after excision, he returned. There was a great deal of flexion, and, as in the previous case, neither motion nor a return of osteitis was to be discovered. The osteoclast was applied with the same result as before. The limb was put into plaster of Paris and patient directed to go on crutches. He was subsequently treated at the dispensary connected with the hospital, and, as his attendance was irregular, it is not known just how long the use of the crutches or plaster of Paris was continued—probably about three months. Seven and a half months after the osteoclasis, or more than a year and a half after the excision, the patient presented at the dispensary with a reflexion nearly or quite as great as before the use of the osteoclast. As then, there was neither motion nor osteitis to be perceived. A steel support, consisting of bands behind the upper part of the thigh and lower part of the leg, connected by lateral bars, was applied. Broad straps of webbing passed behind the bars and in front of the knee, and tended to draw the knee back into the plane of the bars. The brace was put on simply with a view to prevent increase of the deformity, but the pressure thus exerted was found to be sufficient to cause a gradual straightening, though hardly to the degree that existed just after the excision. The use of this apparatus was continued for eight months, when it was gradually laid aside. Two and a half months after all support had been discontinued, or nearly two years after excision, the limb showed no tendency to yield and the patient was discharged. Flexion was about 170°.

Both cases showed evidence of rachitis to the extent of beaded ribs and large joint-ends ; but there was neither bow-legs nor knock-knee in either, and at their ages rickets would hardly be expected to play any part. At the end of eight weeks, manipulation gave every indication of firm, bony union. Whether the deformity which occurred when the limbs were brought into active use was due to yielding of the newly formed reparative material alone, or to the adjacent cancellous tissue, is an interesting question. It is probable that callus from cancellous tissue is always softer or slower to ossify than that from hard bone, and that in these cases it was further modified by the condition of the epiphyses from which it came. But the bony surfaces had been so closely brought together that the amount of new material must have been too small to account satisfactorily for what followed. On the other hand, if the union had been as firm as the adjacent bone, the result was a mass of cancellous tissue nearly double in length that of an ordinary epiphysis. This had been rendered even softer than normal by the congestion usually found around a tuberculous focus. Into each end of this soft mass was inserted one end of a long lever. In standing or walking, the force was transmitted not vertically through the axes of the levers and their median cushion, but in such a way as to cause an increase of the already existing flexion. As the epiphyseal mass subsequently became firm enough to bear without yielding the increased weight, still transmitted at a mechanical disadvantage, it is safe to assume that the soft condition which had existed was due to the perinecrotic congestion, which slowly disappeared after the necrotic tissue had been removed or the traumatism of motion discontinued. The action of the hamstring muscles has been assumed to be a factor in producing the deformity, but when there is very slight flexion existing, it seems evident that their action is extremely ineffective. I believe it to be the case that after excision for dangle-leg or other conditions in the absence of bone disease, subsequent deformity is not the rule.

Clinically, the results in cases similar to the above, should not be allowed to weigh too heavily against excision. Mechanical treatment of osteitis of the knee can only be successful when aided by faithful care on the part of the patient and his friends for an unknown number of years. In many cases this cannot be obtained. If the limb, after the operation, be put up in a perfectly straight position, and if subsequent mechanical support is maintained for a sufficient period—always much shorter than that required by purely mechanical treatment — the danger of deformity is slight. Should it occur, the leverage afforded by the large bones is a powerful aid to its rectification. And while the operation is not always the very short cut to a cure that it has been represented, it has two claims which must be acknowledged. First, it abolishes the traumatism of motion which these cases are rarely able to endure for many years without recurrence of disease. Second, it removes a tuberculous focus which is a constant menace to the patient's life.

TO WHAT EXTENT IS THE DIAGNOSIS OF PREGNANCY POSSIBLE IN THE EARLY MONTHS?

BY CHARLES JEWETT, M.D.

Read before the Medical Society of the County of Kings, October 20, 1891.

The subject assigned to me by the Chairman of the Obstetric Committee is the question: To What Extent is the Diagnosis of Pregnancy Possible in the Early Months?

Before reading the paper I will put in circulation a specimen of nulliparous uterus to illustrate one or two points to which I shall refer in the paper: The preparation shows first the difference in shape of the anterior and posterior walls. The anterior nearly flat, the posterior convex—this is an important point in distinguishing between the gravid and non-gravid uterus. Bellying of the anterior wall is a sign of pregnancy.

Another point is the great difference in the lateral diameter of the uterus in the different regional divisions, it being much narrower immediately above the cervix than through the cervix or fundus. As soon as the ovum lodges in the uterus and begins to grow, the uterus expands between the cervix and the fundus.

The specimen also illustrates the greater density of the median band of the body of the uterus in comparison with the lateral bands on both sides of it. The median section is firmer in the non-gravid organ generally than the lateral sections, yet this central portion is the first to soften in pregnancy.

NORMAL PREGNANCY.

I will assume that the period of gestation with which I am expected to deal is limited to the first three months. Since in the nature of things the question is seldom raised during the first menstrual interval, my subject is narrowed down practically to the signs available for the diagnosis of pregnancy during the second and third months.

It is not my purpose in this presence to consider the more commonplace signs in detail, I may, however, be pardoned a few words with reference to the diagnostic value of some of the familiar evidences of pregnancy. So much stress is laid by most writers upon the difficulties of diagnosis in the early months, that the tendency in practice is to hold the question over till a later period, when its solution is easy. We are told, and rightly too, that histories are unreliable, that many of the earlier signs may result from pathological causes, and that, therefore, we have no sign of pregnancy at this early period that can be considered diagnostic. While this is all true, we do not expect in any line of diagnosis to find conditions so plainly labeled that "he who runs may read." The recognition of early pregnancy, as is true of disease, usually depends, not on any one symptom or group of symptoms, but upon a painstaking analysis of the sum total of evidence in the case. Yet the history alone, if carefully weighed, often establishes a probability so strong that it amounts almost to a certainty. A patient, for example, whose menstrual habit has been regular, who has skipped a menstrual period and has soon after begun to experience the characteristic morning sickness, especially if no morbid cause appears in her history, is almost surely pregnant. Again, all the mammary signs but two may be looked for by the end of the second month. When they can be well made out, their collective evidence in first pregnancies is alone almost conclusive. When found clearly developed in connection with the signs above mentioned, and in the absence of pelvic disease, there is not as much room for doubt as there frequently is in the diagnosis of a pneumonia or a pleurisy.

The most conclusive evidence of pregnancy, however, in the first three months is to be found in the pelvis. Naturally the earliest and the most significant effects of utero-gestation upon the maternal economy are to be looked for in the uterus itself. And it is of these that it is the principal object of this paper to speak. They begin with the fixation of the impregnated ovum, and are for the most part progressive throughout the entire period of gestation. The changes available for our purpose are changes in the size, shape and consistence of the uterus.

Size.—The uterus grows with the growing ovum, and practically at a fixed rate throughout the nine months. It is well known, however, that at the time when the growth first becomes easily perceptible, notably in the second month, the enlargement of the uterus is chiefly in its lateral and antero-posterior diameters. The length at this time is but little increased. This is what would be naturally expected when we remember that in the non-gravid state the anterior and posterior walls lie in contact. The beginning development of the egg has the effect to lift the uterine walls apart and to round them out, the ordinary length of the cavity being sufficient to accommodate the growth of the first few weeks. In course of the third month the growth begins to be an all-round growth. True, the enlargement of the uterus in the first and second months is not solely the mechanical effect of the growing ovum; it is in part due to the increased physiological activity of the uterine structures.

Shape.—The shape of the gravid uterus is practically that impressed upon it by the globular ovum growing within its cavity. The first change in shape, then, is a bellying of the anterior and posterior walls of the body of the uterus. To the touch the bellying is usually most accessible in front; it is most appreciable in front, for the further reason that the anterior surface of the non-gravid uterus, especially in the nullipara, is flattened, while the posterior surface is somewhat convex. The lateral borders also begin to be rounded out. In the non-gravid uterus, especially of the nullipara, the inferior segment—that part immediately above the cervix—will be found much narrower than the fundus above or the cervix below. Since it is in this part of the uterus that the ovum is lodged, the first effects of the developing ovum upon the shape of the uterus are readily perceived in the lateral as well as the anterior expansion of the corpus uteri. The changes in contour are well developed in course of the second month, and the shape at this time is in notable contrast with that of the healthy nulliparous organ. At the end of the eighth week or soon after, a cross section of the uterine body midway between the isthmus and the fundus is almost a perfect circle.

Consistence.—The uterine structures begin to soften from the date of conception. This softening is naturally most marked at first in that segment of the organ included between the cervix and the fundus, since this part is in most intimate physiological relation with the ovum. It is in most cases easily appreciable at the fourth week, certainly by the sixth, and is well developed at the eighth. But little experience is required to recognize the peculiar compressibility and resiliency of the uterus, which contains a living ovum in the latter part of the second month.

I may mention here a practical point upon which I have been accustomed to rely for the recognition of this sign. In the healthy non-gravid condition the mesial section of the lower segment of the uterine body is notably denser than the lateral sections. The softening which characterizes the gravid uterus is most readily detected in this median section. The median ridge disappears, and not only that but this mesial section of the corpus uteri usually becomes less dense between the fourth and sixth week than the uterine structures on either side of it. The softening of this portion of the body of the uterus at a point immediately above the cervix, is the essential fact in

HEGAR'S SIGN.

Hegar's sign, which has become familiar to the profession within the last few years, may best be defined as the compressibility of the isthmus uteri. Its location is the inferior segment of the body at a point just above the cervix, and it is especially marked in the mesial section. To be evidence of pregnancy with a living ovum, this compressibility of the tissues must be accompanied with the normal elasticity. While the compressibility of the isthmus is not equally well developed in all cases, it is always present in some degree during the second month, and when well made out is less liable to fallacy than most other signs of this period. It will be better understood in connection with Hegar's method, which will be described below.

Technique of pelvic examination.—Little need be said with reference to the method of examination for the pelvic signs of pregnancy. It is frequently impossible to fix and palpate the uterus satisfactorily with a single finger *intra vaginam.* With two fingers slightly separated the uterus may be readily balanced between them and the external hand, and may be explored with ease. The surrounding structures, too, are thus brought within easier reach.

When the fundus cannot be readily tilted forward within the grasp of the outer hand, as is sometimes the case in posterior misplacements, the lower segment may be explored by pressing the external hand down against the uterus in front and carrying the internal fingers well up into the posterior fornix. Again, by the use of the index finger *per vaginam*, and the second in the rectum, the entire posterior surface of the uterus may be reached and explored, as late as the second month and later.

In extreme cases, when the importance of the question is sufficient to justify it, the examination may be made under an anæsthetic, when it is otherwise impracticable by reason of undue thickness or rigidity of the abdominal walls or other difficulties. Mere muscular rigidity, however, may frequently be overcome by requiring the patient to breathe rapidly, or by gentle manipulation of the abdomen for a few moments, with a view to disarming the reflexes. It may be objected that all this is a troublesome matter, but the best results in practice are seldom reached except by taking pains.

Hegar's method is as follows: The index finger is passed into the rectum and carried just above the utero-sacral ligaments to a point opposite the isthmus uteri. The thumb of the same hand, passed *per vaginam*, rests upon the corresponding point in front of the isthmus. The tissues thus intervening between the thumb and finger may usually, at about the sixth week or a little later, be compressed almost to the thinness of a visiting card. In difficult cases the rectum may first be distended with water to facilitate the introduction of the finger above the third sphincter, or the examination may be made with the aid of an anæsthetic.

This is Hegar's sign as obtained by his method. I have found no great difficulty, however, in most cases, in demonstrating to my satisfaction the compressibility of the lower uterine segment by the usual bimanual exploration. Forcing the uterus well backward and downward with the outer hand, the isthmus may be readily reached with the fingers of the other hand in the posterior vaginal fornix, and the compressibility or density of the lower segment easily appreciated.

The recto-vaginal modification of the bimanual above described serves the same purpose. The seat of Hegar's sign may thus be more easily explored—though perhaps not with the same precision—than by his manipulation. Or again, when the uterus is freely movable, it may be gently drawn down with a volsella held by an assistant, and the isthmus thus brought within the reach of a finger of one hand in the anterior and the corresponding finger of the other in the posterior vaginal cul-de-sac.

Causes of Failure.—In a small proportion of cases the diagnosis is unfortunately beset with insurmountable difficulties. When all available means are utilized, however, failure can arise only from one of two classes of causes:

1. Pathological conditions which mask the pregnancy.
2. Pathological conditions which simulate it.

In the presence of uterine fibromata, for example, the recognition of pregnancy may be quite impossible in the first three months. The same thing may be true, at least in the second month, from other conditions of the uterus which retard the usual changes of density.

Among the morbid conditions which simulate utero-gestation, especially in the second month, are chronic metritis, subinvolution, fluid accumulation in the uterus (hæmatometra or hydrometra), a flexed and hyperæmic uterus, a soft submucous fibroid.

In general, pathological growths are distinguished from gestation by the absence, for the most part, of the signs of pregnancy and by the presence of the signs of disease; moreover, the rate of growth in pregnancy is unlike that of any other pelvic tumor, and in neoplasms of other organs than the uterus the latter may be differentiated from the tumor by the touch.

Chronic metritis and subinvolution are distinguished by greater density. Fluid accumulations present the characters of a tense cyst. A uterus containing a soft submucous fibroid may usually be easily differentiated from that of gestation by the history. The same is true of a flexed and hyperæmic uterus. The physical signs in the latter case are frequently misleading, especially the softening and thinning at the point of flexion, but there is a notable absence of the normal elasticity of the tissues. It may be remarked here that the gravid uterus of the early months is by some writers described as doughy. This I think is a mistake;

resiliency or elasticity is a notable characteristic of the uterus of gestation, so long as the ovum is living.

It will be observed that the morbid conditions which may mislead are not so commonly to be expected in first pregnancies. The diagnosis is less difficult therefore in women pregnant for the first time, and in healthy primiparæ may be positively established in every case by the sixth or eighth week, frequently at a still earlier period.

Ectopic Pregnancy.—The possibility of diagnosis in ectopic pregnancy has been the subject of much acrimonious discussion. Great difference of opinion prevails. One party contends that the diagnosis of extra-uterine pregnancy is practically impossible before rupture; on the other hand a recent writer thinks the condition should be recognized in ninety-five per cent. of cases. The former opinion, which has been stoutly maintained by Mr. Tait and his followers, is sufficiently confuted by the fact that the diagnosis has been made and the gestation cyst removed by abdominal section in a large number of cases before rupture. A little reflection is sufficient to show that the latter estimate is too high.

It is now generally conceded that with very rare exceptions all ectopic pregnancies are primarily tubal. The major part of them are seated in the free portion of the tube. Pregnancy in the free portion of the tube ruptures before the fourteenth week—in many cases during the second month. The signs on which we must rely, therefore, for the diagnosis of pregnancy before rupture, when the pregnancy is ectopic, include only those of the first three months. Usually only a portion of these are available, since the majority of cases rupture some weeks before the end of the third month. Furthermore, the uterine signs of normal gestation are not all present in ectopic, and those which are found in misplaced pregnancy are not so fully developed as in normal cases at the same stage. Moreover, the occurrence of extra-uterine pregnancy always implies the existence of more or less pelvic disease, and the pathological conditions which have brought about the ectopic fœtation in greater or less degree embarrass the diagnosis. Similar complications are comparatively rare in normal gestation.

Tubo-uterine pregnancy, pregnancy in the intra-mural portion of the tube, is more difficult of recognition than that which takes place in the free part of the tube, and for these reasons: If the ovum lodges at the inner end of the oviduct, close to the cavity of the uterus, the enlargement of the uterus is nearly symmetrical, and before rupture differentiation from ordinary pregnancy is extremely difficult or impossible. If the fruit sac is located in the outer segment of the intra-mural portion of the tube, that is, just within the wall of the uterus, at the cornu, the case is difficult to distinguish from pregnancy in the rudimentary horn of a double uterus. Yet in the latter case the distinction is not important, since the treatment is much the same in both.

It must be granted that in extra-uterine fœtation certain additional signs are engrafted upon those of normal pregnancy, but they are usually more or less masked by the results of pelvic disease. Again, it must not be forgotten that in a large proportion of cases the opportunity for diagnosis never presents before rupture.

After rupture, particularly if much hæmorrhage has taken place, failure to recognize the state of affairs is rarely excusable. With a patient, however, who has suffered habitually from dysmenorrhœal pains and in whom the pelvic organs are misplaced and matted together by adhesions, both the symptoms and physical signs may be extremely misleading even after rupture, especially if the symptoms of internal hæmorrhage and the usual collapse are nearly or wholly wanting.

Résumé.—The diagnosis of pregnancy in the early months rests upon no one sign, but upon the collective evidence of all the signs.

The most reliable evidence of normal gestation in the first three months is to be found in the changes which take place in the uterine tumor.

In the great majority of all cases of normal pregnancy the signs of the second month are sufficient to establish the diagnosis.

In the absence of pelvic disease, pregnancy may be positively predicated in every case of utero-gestation between the eighth and the twelfth week, often at an earlier period.

A ruptured tubal pregnancy, with slight hæmorrhage, may pass unrecognized, usually being followed by recovery.

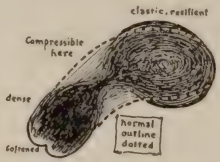
In ruptured tubal pregnancy, with free hæmorrhage, the clinical picture is unmistakable,

While the diagnosis is more difficult in ectopic than in normal pregnancy, it is possible in a large percentage of cases.

REPORT OF CASES OF EARLY DIAGNOSIS OF PREGNANCY.

Dr. R. L. Dickinson.—I have had a number of cases that I have examined immediately before an expected period, that were kind enough to become pregnant immediately afterward from a single coitus, and then kind enough to return to me two or three weeks subsequent to that coitus—cases where a perfectly clear history was obtainable. Where there was reason to doubt the statements of the patient the histories are excluded.

I have detected the changes in the uterus even earlier than Dr. Jewett mentions. Let me give an instance. The patient was a multipara, and on examination exhibited a lacerated cervix, and a uterus slightly enlarged. I examined that case again three weeks after a single coitus, and the uterus presented this shape; I draw the "waist-line" between body and cervix, not because the organ is really thinner at this point, but because it feels so. At the fourth week the uterus is still somewhat firm down the middle, but the ridge is distinctly less dense than before. It persists after the lateral borders have softened. I have found that ridge as late as the eighth week. In my experience compressibility, or softening, at the junction of the cervix and body, is less generally found than the elasticity of the body. After the third week the cervix is found to be the densest part of the uterus.



The most distinctive changes in early pregnancy are bulging and elasticity of the upper part of the uterus. When the bulging is posterior, it is usually very distinct, resembling a ledge. Of my cases, the changes were demonstrated, and the cases diagnosed as pregnancies, one on the sixteenth day after a single coitus, one case on the nineteenth day, one on the twenty-first day, several between the twenty-second and twenty-fifth. I shall report them in detail before the Academy of Medicine. I know perfectly well that the spermatozoa may lie some days waiting for the ovum, and that the ovum may remain some days before it may meet with the spermatozoa, also that impregnation usually occurs in the tube, and then that the ovum must slowly travel into the uterus and find lodging, and therefore we would have to subtract ordinarily some days from my statement. For instance, a case of pregnancy nineteen days after coitus we might have to report as only twelve days pregnant, but I take it in such a case, where the uterus distinctly enlarges as early as the nineteenth day after a single coitus, that impregnation of the ovum must have occurred in the uterus, in order to permit the enlargement to have occurred so rapidly.

The main point which I wish to emphasize is, that the elasticity, resiliency and bulging of the body of the uterus are far more valuable as signs of pregnancy than the compressibility at the junction of body and cervix (Hegar's).

I would like to ask Dr. Jewett a historical question: Whether this condition was ever described in print before he began to lecture on it? As far as my knowledge of obstetrical literature goes, the elasticity and vaulting were taught by Dr. Jewett before anything of the kind appeared in the journals.

DISCUSSION.

Dr. Skene.—The paper and the supplement are of so much value to the gynæcologist, especially to the one who has to do a surgical practice, that it would be hard to overestimate their value. It is duly appreciated by one who is continually engaged in making differential diagnoses between neoplasms in the pelvis and abdomen, and the condition of pregnancy. That it is even of more value to the gynæcologist to be able to make a positive diagnosis than to the obstetrician, you will admit when I remind you that the obstetrician has this advantage, that if in doubt he can wait and the diagnosis is made for him, or made more easy for him, whereas the surgeon, who has to determine the treatment at once, is liable to get into more trouble than he can get out of easily, if, for example, he mistakes a pregnancy for a fibroid and proposes to do a hysterectomy for its relief.

While expressing my great appreciation of the contributions of the paper and the illustrations, I would like to call attention to three signs of pregnancy, which I think have not been alluded to, and which I consider of great value.

First, in addition to the elasticity or softening of the uterus and its change of form, there comes with that a difficulty of mapping out the uterus. It is exceedingly difficult to outline it in some cases, and that very fact is of great value because anything else which is likely to simulate pregnancy is more clearly defined because denser, as a uterine fibroid, subinvolution, a distended Fallopian tube or an ovarian cyst, for instance. More than that, in the early months of pregnancy the uterus grows out of proportion to its surroundings, and so its mobility, or the facility with which it can be displaced, is lessened. You will find it is more difficult to raise a pregnant uterus up out of the pelvis or toward the superior strait than in any other condition—than in cases of most, not all—small fibroids which enlarge the uterus, or subinvolution, which does the same thing. This partial fixation is rapidly overcome in the latter months of pregnancy, especially after the third month, when the function of development of the uterine ligaments is taken up and goes on rapidly.

The second sign which I would mention is the color of the mucous membrane of pregnancy, which is different from everything else—nothing simulates it. It is present in a lesser degree in ectopic gestation, but in normal gestation this color of the mucous membrane is not simulated by any marked condition that I know of. That peculiar bluish violet hue, if seen a few times, is easily recognized afterwards, and becomes of the greatest possible value, and I depend very largely upon it. Of course it requires a careful speculum examination in order to see it, but it is worth the trouble in doubtful cases.

The third sign is the peculiar secretion in the cervix. There is a difference between the secretion in the cervix of the pregnant uterus and that of any other pathological condition. In the pregnant uterus the cervical secretion has a whitish, opaque appearance, that at first sight is very much like the leucorrheal discharge in a case of muco-purulent cervical endometritis, but careful examination proves that it is not, because it contains pus, which gives the opaque appearance, while in pregnancy opacity is due to the coagulation of the albumen by the secretions of the vagina. That is characteristic of pregnancy and occurs in no pathological condition, and is almost always present. When I find that opaque secretion of the cervix, that peculiar hue of the cervix and vagina, and the other physical signs, I am more positive of the diagnosis in the early months of pregnancy than in the fourth or fifth month, when fœtal motion is present, but, on account of a fatty abdomen, is hard to distinguish.

I meant simply to emphasize the fact that the diagnosis can be made with some degree of positiveness, and if I have emphasized the importance of the diagnosis, then I have done what I most desired to do.

Dr. Wallace.—May I enquire of Dr. Skene at how early a period he can recognize the discoloration he refers to? The paper of the evening took in the first three months.

Dr. Skene.—"Discoloration" is hardly a good name for it; it is a specific color produced by a well-balanced arterial and venous physiological hyperæmia. It begins to develop as soon as the uterus begins to change. I am sure I have noticed it at the end of the first month, so as to recognize it. It increases gradually, the color becomes deeper—up to the end of gestation. After the third month it becomes more venous and gives that bluish look which we see in the later months of pregnancy, and, by the way, may be simulated in certain neoplasms. But the sign is apparent from the end of the first month up to three and a half months. It is a most marked characteristic, and I think unmistakable.

Dr. MINARD.—From the material mostly obtained at the gynæcological clinic of the Brooklyn E. D. Dispensary and Hospital, I have been, and am still making, some careful observations upon the early diagnosis of pregnancy. I will mention here only the result of my clinical notations upon eighty-six cases taken from a table of one hundred and forty-seven patients who presented themselves for examination, most of them seeking to know if they were pregnant; the others when they would be confined. The sign of "blueness" or the "violet point" and Hegar's sign, I have been able to follow fairly satisfactorily in these cases. I teach my women to keep the count of their monthly periods in days, as I like to keep my obstetrical record in days.

These eighty-six cases range all the way from thirty-four to two hundred and forty-five days. Eighteen within the eighth or ninth week responded to the Hegar sign, and thirteen within the twelfth and fourteenth.

The "blueness" or the violet point on the anterior wall of the vagina just below the meatus urinarius was found as early as the tenth week only on four patients. On patients about the fourth and fifth month, only seven showed the internal labia discolored, while after the seventh month it was found wanting only in fifteen. I have not yet been convinced that it is a diagnostic sign in a very early stage. Hegar's sign is not demonstrable in early pregnancies, but is a sure test in a majority of cases.

In the pregnancy of the cases of the thirty-four and thirty-five days, the diagnosis was made from Hegar's test and suppression of the menses. The sign was very clear here.

In the eighteen cases of two months and two and a half months, the condition of the lower anterior portion of the uterus as described by him was easily made out.

I would like to ask the committee where the point of softening takes place, how far above the internal os?

Dr. JEWETT.—With reference to the historical question, my acknowledgments are due to Dr. Dickinson for his kind suggestion, but I am not able to give the date of Hegar's discovery, if we may call it such. My impression is that he first published it in 1882, but it was not known in this country until some years later. Even then, there was a great deal of confusion as to what constituted Hegar's test. As I now understand it, it relates simply to the compressibility of the isthmus uteri.

With regard to the points made by Dr. Skene, the fixation of the uterus and the difficulty of mapping it out, as signs of pregnancy are new to me. The former, possibly, is hardly available in the period with which the paper deals. As to the color of the vagina and cervix in gestation, one of the best contributions we have had to that subject we owe to Dr. Chadwick. In a large number of observations he found this sign in about five-sixths of all cases at the end of the third month. I have been strongly disposed to the opinion which Dr. Skene has emphasized, namely, that the color of the vaginal mucous membrane in pregnancy is different from that which we have in disease.. And I have recently made notes of the color observed in a number of cases of pregnancy and disease, but have not been able, as I had hoped, to clearly establish the distinction.

There is reason, possibly, to assume that the dusky hue of pregnancy may be distinguished from that caused by morbid conditions, if Dr. Chadwick is right. He calls attention to the fact that the peculiar coloration of pregnancy is most frequently present and most marked on the anterior wall of the vagina immediately behind the meatus urethræ, and he considers it due not to mere venous engorgement, such as occurs in disease, but to hypertrophy of the cavernous structures in this region. Yet the appearances in pregnancy and disease are so nearly alike that the distinction is usually difficult. The color of the vagina at the point mentioned, however, is a useful sign when present, and especially since it may be easily observed without the aid of a speculum. The purplish color of the vagina and of the cervix may be looked for from the beginning of pregnancy, yet in a large proportion of cases it is not sufficiently developed to be well made out in the first weeks, and in about seventeen per cent. of cases, as Chadwick has shown, is wholly absent in the early months.

In reply to Dr. Minard's question, I may say that the point for Hegar's test is the lower segment of the uterus immediately above the cervix.

THE ABSORPTION OF UTERINE FIBROIDS WITH REPORT OF CASES.

BY WALTER B. CHASE, M.D., BROOKLYN, N. Y.

Read before the Medical Society of the County of Kings, October 20, 1891.

Uterine fibroids sometimes disappear by spontaneous absorption. By what change in the nutrition of the part this is accomplished is not always understood. Ordinarily, such an event is devoutly appreciated as nature's kindliest method of recovery. Exceptionally, it is attended with results not simply to be regretted, but which involve the patient in extreme danger. Happily this class of cases is infrequently met with, and very possibly some reported cases of recovery of uterine myoma which were reported as due to therapeutic measures were really the result of spontaneous absorption. What then may be regarded as the real power of therapeutic measure to promote absorption?

It is not my purpose to discuss all measures employed in their treatment, but to refer to some rational methods used to aid in their absorption. Neither shall I, for want of time, refer to the question of diagnosis except incidentally.

It is a noticeable fact that uterine fibroids rarely kill—at least, directly. I have never seen but one case resulting fatally, and that was a patient of Dr. N. S. Roberts, of New York City, during last winter.

The danger arises principally from resulting hæmorrhage, sloughing and consequent septicæmia, rapid absorption with sepsis, or from inflammation excited by pressure upon the peritoneum. Uterine fibroids are sometimes a source of much suffering. Successful treatment by absorption depends largely upon the location of the growth, and the conditions favoring it are entirely within well-known physiological laws, viz., that continuous pressure on a part produces absorption. Usually the careful study of a given case will admit of easy diagnosis, as to the position of the tumor. If sub-peritoneal, this method of treatment is unavailing, if submucous, it is quite as likely to result in throwing the mass out of the uterine cavity as to diminish its size.

It is applicable only when the tumor is interstitial—and above the cervix—where the influence of uterine contraction has opportunity to exert its power.

It is here the marked curative influence of ergot manifests itself. To understand this subject in its true bearing, it would be well for a moment to consider the physiological influence of ergot upon the economy.

It is a generally accepted fact that it acts through the vasomotor nerves by stimulating to contraction the circular muscular fibres of the blood-vessels. But this does not wholly explain the action of ergot on the uterus. It also appears to have an influence on the non-striated muscular structures wherever found, and these involuntary muscular fibres are plentiful in the uterus. Its selective affinity here witnessed explains the phenomena of uterine contraction, while its power to control hæmorrhage, wherever present, is doubtless due to its influence on the vaso-motor nervous system. Presumably this double influence is present in the therapeutic use of ergot under these circumstances. Now the degree of action required is a matter of careful consideration, and it will be helpful in its therapeutical application to inquire whether the dose can be so regulated as to produce only salutary effects.

Emmet alleges it is possible to diminish the blood supply to such a degree as would invite disintegration and the development of serious trouble. I have never witnessed such results, but care should be taken to avoid such a complication. The question of the dose must be found in the study of each individual case; enough should be given, if the action is kindly, to influence a state of mild constant contraction, and this persisted in, if need be, for months, until observation settles the question as to change in the size of tumor.

It is therefore apparent, positive knowledge is needful to intelligent management of such cases. The sound, or the finger, in the uterine canal must be our guide. This may involve the necessity of dilatation of the cervical canal for diagnosis or later investigation.

Sometimes it is difficult, if not impossible, to follow the uterine canal with the sound. The uterus may be greatly distorted by the inequalities of the growth, and the canal found to be tortuous. The development of the tumor in the anterior wall of the uterine body may completely fill the pelvic cavity and thereby carry the os up nearly to the promontory of the sacrum. It may also occasion flexions and versions which render the introduction of the sound very difficult. Another obstacle to satisfactory exploration is found when a small fibroid growth is developed in the cervix impinging on the uterine canal. It is not always an easy matter to determine its presence. Two years ago I met with difficulty in attempting to pass a sound in the uterus of a sterile woman. I was able from bimanual palpation to determine the position of the uterus in the pelvis and felt quite positive as to the proper curve I should give the sound; but my efforts were unavailing, and on her first visit I failed in reaching the uterine cavity. I had about arrived at the conclusion it was a case of stenosis of the internal os, a rather infrequent condition when not the result of flexion, but refrained from making any effort at forcible dilatation. On her second visit, after a prolonged but gentle effort, I succeeded in passing a small uterine probe, but not until I had given it a spiral curve, which enabled me to pass around a small submucous fibroid lying on the left side of the cervical canal, just below the internal os, with no external evidence or suggestion of its presence.

In some women the action of ergot is *nil;* it has no power to cause uterine contraction, and is therefore useless; but this peculiarity is believed to be rare.

Chloride of ammonium is believed by some to have a specific power in promoting absorption of uterine fibroids, so also to the iodide of potassium, bromide of potassium and bichloride of mercury is attributed a similar influence. Concerning these effects I have no personal knowledge. Regarding the value of ergot I will briefly relate two cases: Mrs. A., of Westchester County, aged about 40, who had never had but one child, came under my care about five years ago. She was a woman of highly nervous temperament and apprehensive of any deviation from health. She had for quite a period of time suffered from pelvic pains, associated with bearing-down sensation. Examination revealed an interstitial fibroid occupying the right half of the corpus extending to the right ovary, the mass lying in right iliac fossa and the uterine cavity measured five and one-half inches. Ergot was administered in doses of four grains, three or four times a day, and continued for a period of about eight months. Observations at intervals of a month showed signs of a decrease in the size, and at the end of the period mentioned it had diminished to one-third the original dimensions. I have not seen her since, but doubtless should have done so had it given her further trouble or had there been perceptible increase in its size.

CASE II.—Mrs. M., of Suffolk County, aged 42, consulted me for a growth in the abdomen, October, 1885.

Its development was quite symmetrical, and the uterus reached to the umbilicus, and was of the hard variety, and, like the other, intra-mural. The principal inconvenience, apart from some general impairment of health, was the size, and the pressure it caused on the pelvic viscera, particularly the bladder. Her fears were greatly aroused, which eventually reacted in her favor, as she was exact and persistent in carrying out my instructions. The treatment was begun by the hypodermic method, the needle being inserted subcutaneously in the abdominal wall over the uterus, care being taken to guard against sepsis. Later on this was superseded by the internal administration of ergotine. This treatment was persisted in for the period of a year. The progress was slow but satisfactory, and the growth was then but one-third the size that it was when she came under treatment and her general health restored. I received a letter from her this month in which she says she is well, but that she knows the tumor remains unchanged in size since my last examination.

While other cases of improvement could be cited as proof of the efficacy of ergot in the treatment of this class of cases, it is not to be inferred or presumed that such results are always attainable. It, however, offers hope for those suffering from the interstitial variety of fibroma.

For a few years the method of Apostoli by galvanism has received much attention and has been tested by many. I shall not enter upon its discussion except to say that while the testimony of some is favorable, and even enthusiastic, the balance of opinion at this time seems to be that it has proved disappointing, and that its use is not unattended with danger in the presence of tubal disease and peri-uterine inflammations. Its power to reduce the size of œdematous fibroids is undoubted, but whether the diminution in bulk is the result of absorption of other than the fluid constituents of the tumor there is reasonable ground for doubt. Certainly no one should presume to use galvanism in the treatment of the pelvic disease of women who is not an expert in diagnosis and in possession of a thorough knowledge of electricity and its therapeutic uses.

I can but allude to oöphorectomy as a method of arresting and diminishing fibroid growths. In cases where other treatment fails and the tumor is not very great, and the enlargement progressive, removal of the ovaries is often attended with highly satisfactory results, and in proper cases is justifiable. As uterine fibroids sometimes disappear by spontaneous absorption, it should be remembered as possibly influencing the results attributable to treatment. Rapid spontaneous absorption, attended by septicæmia, are of infrequent occurrence. A case of this variety came under my care several years since which is worthy of record. Mrs. ——, aged about 36, consulted me for some error of indigestion, not suspecting the cause. The uterus was on the right side of the abdominal cavity reaching nearly to the inferior border of the liver. She had long complained of pressure in this location, but no explanation of it had been attempted. For some period of time, a year or more, subsequent to this, she was under treatment for the growth by a very eminent gynæcologist without any marked result. At the time of the development of acute febrile symptoms she was exhausted from long watching by the bedside of her husband, who had just died of typhoid fever. She had a chill while attending his funeral. The reaction was pronounced and the fever high. For the succeeding four days her range of temperature was such as ordinarily attends continued fever, and it seemed probable she was developing a fever of the same type which had proved fatal with her husband, when on the fourth day, without any apparent cause, she had a violent chill, in which she complained of a sensation along the spine as though there was a cake of ice closely applied, a frequent symptom of septicæmia, followed by a temperature of 105°, profuse sweating, and marked depression of the vital powers to a degree almost alarming. I felt confident it was a case of septicæmia, but was in doubt as to the source of infection Dr. Skene saw her in consultation with me many times and coincided in the diagnosis, but could not fix the source of sepsis. For the next two weeks, at irregular periods, from two to five days, there was recurrence of a chill and the same high temperature, with danger of exhaustion. Between the attacks the temperature was normal, or within one or one and one-half degrees of the normal point, and there was some rallying of the vital powers, though there was increasing debility.

After repeated examinations, we thought we could discover a shrinking in the size of the fibroid. The next septic manifestation was more alarming than any which had preceded it, and her life was in great jeopardy. As the symptoms became more grave the evidence became conclusive that the tumor was rapidly diminishing in size and our diagnosis was confirmed. For another week her condition was well-nigh hopeless, and her friends were advised that another chill would probably prove fatal. Fortunately it did not occur, and from this time on her convalescence, though slow, was not interrupted, and after a period of more than two months she was able to leave her room, and the growth had diminished to fully one-half its previous dimension.

It should be mentioned that during the time of this spontaneous absorption there was no evidence of softening of the growth, neither were there any recognizable signs of local inflammation, and the objective symptoms were those of typical septicæmia.

DISCUSSION.

Dr. Skene.—The paper is interesting, as showing us one way in which fibroids may disappear. There is another and milder way, well known to the Doctor, which he did not mention, because his cases were not of that character, and that is where a cellulitis takes place in the capsule of the tumor, the result of the inflammatory exudate being to cut off the circulation and so interrupt the nutrition of the fibroid and insure its disappearance. I have seen quite a number of such cases where the patients have been seized with an acute attack of pain and tenderness and some elevation of temperature, in short, giving a history of a mild form of inflammation in the region of the tumor. Sometimes the inflammation may eventuate in a breaking-down process, and suppuration may follow, or it may stop short of that, as in Dr. Chase's case. The diminution of the tumor is much surer and safer, however, if the inflammatory exudate interrupts the circulation. I have seen all this often enough to know that it is one of the ways in which nature takes care of these fibroids. When we take into account the use of ergot to expel fibroids from the cavity of the uterus or to aid the sub-peritoneal variety in becoming pedunculated and therefore harmless, and then this rapid spontaneous disappearance, and the more slow resolution I have referred to, and the fact that uterine fibroids are rarely fatal (Dr. Chase in all his years of practice has seen but one fatal case; he and I have seen only three, in one of which it was doubtful whether death could be attributed directly and wholly to the fibroid); taking all this into account, I am sure it is suggestive and at least helps some of us, who are fond of surgery, to keep our hands off fibroids, so far as surgical interference is concerned.

I am glad Dr. Chase has called attention to this method of treatment by ergot, so as to secure absorption and disintegration, or from inflammatory action and mal-nutrition, because we have been of late years a little inclined to forget that ergot was useful in a certain number of cases, and have relied more upon electricity and hysterectomy and removal of the ovaries, etc., so I think the effect of the paper is to bring us back to the use of a most valuable remedy and remind us that ergot and electricity are capable of curing as many cases as the scalpel, ligature and clamp.

CAUSE AND AVOIDANCE OF LACERATION OF THE PERINEUM.

BY J. E. LANGSTAFF, M. D.

Read before the Brooklyn Gynæcological Society, November 6, 1891.

It is my purpose only to bring to your notice such observations as I have made in regard to the cause and avoidance of laceration of the perineum.

The amount of injury so frequently received by the perineum, necessitates that more care should be taken concerning its safety. The fact that about one-third of the perineums have been more or less injured during delivery proves conclusively that the outlet should not be left to chance nor till danger is at hand. I do not wish you to infer that in the majority of cases the perineum is not taken into consideration; but to wait until distension begins before applying treatment is unwise. It has been said that some perineums will rupture in spite of efforts at prevention. I cannot believe such to be the case, as the tissues of the outlet are elastic and should be made to accommodate all that the unyielding inlet will allow. One of the causes of laceration is the rapid dilatation of the ostium vaginæ, especially in forceps cases. Another is the *direction* of force exerted by the uterus in vertex presentations at the time the perineum is being distended. As this latter cause has to do with the mechanism of labor, it will be advisable to consider the best mechanism, and then observe if such be carried out in all cases of natural labor with the occiput anterior. As the head is of an oblong shape and attached near its occipital end to the body by the cervical vertebræ, the pressure exerted by the uterus will cause the occiput to lead the way. The head will thus pass through the brim in the cervico-bregmatic, which is the smallest diameter, and should pass in a straight line downwards into the pelvis, until the occiput is relieved from the pressure of the pubes, when it should pass outwards beneath the arch of the pubes at right angles to the line of descent, requiring very little assistance from the uterus in this last direction. As the occiput or small end of the head passes outwards it will enlarge the ostium vaginæ gradually, and delivery will take place in the cervico-bregmatic or smallest diameter.

By passing the hand into the vagina during the descent of the head, and placing the thumb at the arch of the pubes, with the fingers towards the sinciput, it will be found that, before the occiput has passed sufficiently low down to be relieved from the pressure of the pubes, the sinciput is sweeping the floor of the pelvis and forcing the perineum before it. In this way the long side of the oblong-shaped head is brought into contact with the distended perineum, and the latter is being held in this position by the sphincter muscle of the vagina, which has not as yet been put upon the stretch.

This extension of the head before the delivery of the occiput appears to be caused by an uneven pressure of the head in the pelvic cavity. The unyielding bony rim of the inlet is changed to the soft lining of the sacrum and coccyx in the cavity. The rami of the pubes seem to detain the occiput, and as extension proceeds it remains on a pivot, as it were. In forceps cases I have been able to prevent this extension by applying traction in such a way as to increase the pressure of the sinciput against the hollow of the sacrum, and thus allow the occiput to complete its descent. As extension continues, the line of force exerted by the uterus through the cervical vertebræ changes from the occiput to the sinciput, and the former is, practically speaking, left inside the arch of the pubes while the latter is forced in the direction of the anus. To apply pressure on the distended perineum at this stage is only to increase the danger. To draw the sphincter muscle back over the head seems too great a risk, and should it pass safely over the head it will still retain sufficient contractile power to secure a rupture by the oncoming shoulder. If we were to consider these cases from a surgical standpoint, the perineum would have been *prepared* for such an emergency. With this era of antiseptic surgery the time has come when the sentimental idea of leaving everything to nature should be ignored. Nature's bag of water may make a very good dilator of the birth-canal in the lower animals, but in the human being it fails completely. I have dilated the ostium vaginæ on three different occasions in primiparæ, and am satisfied with the result. One was a large child with a vertex presentation, another a breech case. In no case was there any rupture or delay in the passage of the head through the outlet, and the ease with which the hand was introduced in bringing down the arms in the breech case was very gratifying. To paralyze the sphincter and so dilate the outlet, I gradually insert four fingers into the vagina, as far as the hand will allow, leaving the thumb outside, then with the palm against the fourchette I press gradually downwards till the hand reaches the coccyx. This procedure gives no pain to the patient, will require from ten to fifteen minutes' time and should be done as soon as labor begins.

The hand can then be passed into the vagina, and if the membranes have ruptured before the cervix has passed over the head, I do not see why the os uteri should not also be dilated to such an extent as to prevent injury by the hand.

With regard to the early extension of the head, I have not so far been able to prevent it by means of the hand in the vagina; but in forceps cases, by means of a device which I have previously described in the *American Journal of Obstetrics*, No. 1, of 1890, and which I will briefly describe, it is easily done.

An oval metal plate, 5 by 8 inches in size, is passed beneath the pelvis of the patient. The forceps are then applied; and a loop of chain which is passed over the handles is hooked on to the plate. On the handles being raised the forceps act as a lever, with the chain as a fulcrum beneath the arch of the pubes. The head is thus drawn downwards and backwards into the hollow of the sacrum. As very little power is required to bring the head through the brim in this direction, only one hand is required for traction; the other can be passed partly into the vagina to ascertain when the occiput has descended sufficiently to insure its passage outwards beneath the arch of the pubes when the forceps are removed. By this means, the ostium vaginæ, having been dilated and extension of the head prevented, an uninjured perineum should be the result.

DISCUSSION.

Dr. Chas. Jewett.—Among the questions raised in the paper are first that of the frequency of perineal or better pelvic floor injuries. The proportion of lacerations in first labors under the best conditions, and the most skilful management may be fairly stated at fifteen per cent. As cases go in general practice they amount to nearly or quite thirty-five per cent.

The difference in these two figures is the proportion which could and should be prevented. In multiparæ the frequency is very much less, except in artificial delivery, and should be insignificant in all properly conducted labors.

Another point discussed by the reader of the paper, the etiology of pelvic floor injuries in labor, is somewhat difficult to clearly define. The principal causes are :

Narrow pubic arch.
Small size (relatively) of the parturient outlet.
Undue rigidity of the pelvic-floor structures.
Faulty mechanism.
Over-rapid delivery.
Unskilled use of forceps.

Abnormal rigidity of the resisting girdle at the outlet is frequently the result of persistent muscular tonicity, especially of the levator ani, and this is doubtless one of the factors in the greater frequency of tears in forceps births. Spontaneous expulsion usually implies regular uterine contractions, and with the normal action of the expelling forces rigidity of the pelvic-floor muscles as of the cervix is exceptional. We frequently find the levator so powerfully contracted at the beginning of labor that it is with difficulty we can reach the cervix in the first examination. Yet this barrier melts away and all becomes lax in the ordinary course of normal labor. In irregular action of the uterine muscular structures we may find more or less spasmodic contraction of the levator after the head reaches the pelvic floor. Both are probably due to a common cause in the nervous system—faulty innervation.

I am quite sure that the worst injuries, both in character and extent, occur in artificial deliveries, especially in forceps extraction. This is due, oftentimes, to the abnormity which calls for interference, but more frequently to the misdirected efforts of the obstetrician.

For the prevention of pelvic-floor injuries, the usual formula in my practice is delay and delivery by the smallest diameters. Of these measures the most efficient is delay. Not less than a half hour as a rule should be consumed in the perineal stage in first labors, as the statistics published by Dr. Dickinson have shown. To get the full benefit of delay, however, the presenting part should be held continuously in the resisting girdle, should not be permitted to recede in the intervals between the pains. Expulsion is regulated at the perineal stage by the following methods : By chloroform, by taking off the abdominal pressure and by direct manual control. Chloroform is capable of accelerating, retarding or arresting the pains according to the freedom of administration. Given nearly to the surgical degree at the moment of expulsion it not only slows up the descent but relaxes the resisting muscles. The expelling power of the abdominal muscles is generally *nil* under full chloroform anæsthesia ; in the absence of anæsthesia, it may usually be controlled by requiring the patient to breathe rapidly during the pains. The hand should be applied, not to support the perineum, but to retard the expulsion. For this purpose the thumb and first two fingers may be pressed against the head, or thumb against the occiput and the fingers over the bulging portion of the pelvic floor, one to either side of the anal orifice. This manipulation serves for the dorsal decubitus. In the lateral posture the control of the head is even easier and the method sufficiently obvious.

The mechanism will usually take care of itself if not disturbed by misdirected interference. The head, however, should be pressed well up in the pubic arch as the equator of the head is about to escape.

There can be no objection to preliminary relaxation of the vaginal outlet as advised by the author of the paper. The practice seems rational and may be useful when it is desirable to save time. It is not generally endorsed, however.

In forceps extraction the danger comes from bad mechanism, not from the superadded thickness of the blades, which is unimportant. The forceps properly used is a very convenient and effective method of regulating the rate of expulsion. Yet, as a general rule, it is safer practice to remove them before the birth of the head.

One other method which has proved of great value in my practice is episiotomy. It is reserved for cases not otherwise manageable without rupture. The lateral incisions save the laceration of the levator and of the sphincter ani, which are the worst forms of pelvic-floor injury. When done at the right moment and sutured after labor, the result is a vastly better condition of the pelvic floor than is usually possible after the repair of the worst varieties of laceration, particularly those involving the vaginal attachments of the levator ani. The method is simple. The instrument which I use is a blunt-pointed tenotomy knife. The cut is best made while the resisting ring is on the stretch during a pain. This ring is felt by the finger as a cord-like girdle at the height of the pain; the knife is passed flatwise between the head and the vulvo-vaginal ring. It is held nearly in line with the long axis of the patient's body. The cutting edge is turned outward and the ring incised horizontally. A similar incision is made on the opposite side. The location of the incision is a full inch from the median line, posteriorly, in the stretched condition of the parts ; its length about an inch, falling short of the skin, and its depth a quarter of an inch. In a typical episiotomy the perfect coaptation of the parts by suture is a simple matter. Turning the patient on the side opposite that to be sutured, the blood flows away from the wound. The sutures are easily applied. The parts are restored to their original integrity, and ultimately the pelvic floor is as firm as though childbirth had never occurred. If by chance the incisions are not properly timed, are done too late, the operation would have better been omitted, as the combination of cuts and tears makes it extremely difficult to comprehend the normal relations of the parts and to correctly apply the suture.

SPEECH IMPEDIMENTS—PREVENTION AND CURE.

BY EDWARD ECK.

When the child shows slight traces of stammering, parents often do not consider the matter of sufficient importance, or else follow the advice of others by saying: "Let the matter alone, the evil will decrease as the child grows older."

It is in a high degree injurious to speak harshly or abruptly to a child for defective utterance, for nothing is more adapted to promote stammering than fear. If parents have failed to understand the child, let them cause it slowly to repeat its words. Parents should never call to the child: Will you speak better! Such way of dealing with the trouble is very wrong. The unfortunate child cannot speak better, and the evil, instead of decreasing, grows with its growth; the bad habit becomes through carelessness a lasting defect—a second nature.

How can we prevent stammering in early youth?

Being a teacher for eleven years—and a reformed stammerer—I will give some exercises which I use in my school.

Let the child stand passively erect, hands hanging loosely; let it inhale slowly through the nostrils, filling the lungs; then let it exhale quietly through the mouth. The child should not raise its shoulders. Repeat this exercise, increasing the breathing. If dizziness ensue, discontinue for a while. The same exercise again, with its hands on the hips. After inhaling let it sound the vowel *a* as long as possible.

Then *a e* with one breath.

Then *a e i* with one breath.

Then *a e i o* with one breath.

Then *a e i o u* with one breath.

Combine vowels with consonants; for instances:

*A*d*a* *O*d*o* *E*d*e* *I*d*i*.

*A*d*e* *O*d*i* *E*d*a* *I*d*e*.

d*A* d*O* d*E* d*I*.

*A*m*a* *O*m*o* *E*m*e* *I*m*i*, etc., etc.

The vowel is the carrier of the syllables or words, therefore no stress on consonants. Then we may proceed with more difficult words, speaking them slowly and distinctly.

After having reached this point, we form small sentences, speaking word after word in a long-drawn manner, as:

G*oo*d m*o*rning.

G*oo*d n*i*ght, d*ea*r m*a*m*a*.

Some cases require more attention and should be given to a teacher whose professional position is a guarantee against deception—certainly not to such pretenders who profess to cure the impediment in a few lessons, and whose "method" involves singing, stamping or beating time, or bridling the mouth with mechanical appliances, as bands over the larynx, tubes between the lips, pebbles in the mouth, etc., etc.

GRADUATING EXERCISES OF ST. MARY'S TRAINING SCHOOL FOR NURSES.

ADDRESSES BY DR. JOHN BYRNE, HON. JOHN MAGUIRE AND MISS BLANCHE KINSELLA.

The commencement exercises of the first graduating class of the St. Mary's Hospital Training School for Nurses, consisting of eleven nurses, took place December 17th at the Brooklyn Athenæum.

Addresses were made by Hon. John Maguire and Dr. John Byrne. The valedictory address was delivered by Miss Blanche Kinsella, of the graduating class. Each graduate received a diploma and a gold medal.

ADDRESS OF DR. JOHN BYRNE.

It would seem to me but fitting that I should say a few words touching the more intimate relations which for over two years have existed between the medical and surgical staff of St. Mary's Hospital and this first class of graduates from our training school. It is worthy of remark just here that the date accidentally and without forethought fixed for the exercises of this evening, and which for those more immediately concerned must be a happy event to look back to in the future, is the ninth anniversary of the opening of St. Mary's Hospital. Let us hope, therefore, that a coincidence so noteworthy in our affairs may augur for this offspring of our institution a degree of success worthy its source, and a reputation of which we may have reason to feel proud. Soon after the opening of the hospital it became very evident from the rapidly increasing number of patients that neither the proverbial enthusiasm of the sisters of charity in their noble work of caring for the sick and afflicted, nor their self-sacrificing readiness to test to the utmost their physical powers, would suffice to meet the arduous duties devolving upon them. The constant demand, too, on the mother house from all quarters have so far exceeded the supply that it was often difficult and sometimes impossible for our indefatigable and efficient superioress, Sister Emeliana, to obtain an adequate number of assistants, however well disposed and qualified, to thoroughly carry out the beneficent work of the hospital as outlined by the trustees and the medical and surgical staff. Under these circumstances it became necessary from time to time to invoke outside aid by hiring a limited number of trained and experienced nurses. In this manner, though the overworked sisters obtained considerable relief by being freed from some of the more arduous duties, yet the great need for the equipment of a coöperative body of well-instructed young women, over whom, however, the sisters should exercise a general control and supervision, became daily more and more urgent. Hence the establishment of our training-school, and as a natural and logical outcome this first class of thoroughly qualified graduates. It is, then, no little gratification for me to be able to state that not only has this important addition to our hospital service been a success, but the sisters, under the guidance of their wise and prudent head, have always coöperated heartily with our lay nurses and pupils in their duties to the sick, while the latter, through the able and singularly efficient efforts of Miss McDonald as their superintendent, have industriously and conscientiously pursued their work and studies, and without in a single instance presuming to question or in any manner to interfere with the supervisory control of the sisters, I make this statement to show that if in the beginning any one may have had misgivings regarding the practicability of organizing a training school for lay nurses in an institution which the sisters of charity controlled, and in the management of which these devoted women played an all-important and leading part, our exercises here to-night would suffice to dispel all such doubts. It is hardly necessary to add as a result of all this that the nursing service in St. Mary's is second to none in completeness and efficiency. The members of the medical and surgical staff, by regular lectures and at different clinics, have taken every pains to instruct the pupils in the leading principles underlying the intelligent care of the sick. You, ladies, have also had advantages by no means common to all hospital training schools, and which you will be able, in the future pursuit of your responsible calling, to turn to profitable account. I refer to your practical work in the maternity wards, where you have been taught the most modern and improved methods of caring for the parturient patient and her tender and helpless offspring. Thus, having enjoyed unusual facilities for acquiring a thorough and practical knowledge of your duty toward the sick, and, doubtless, impressed in no small degree by the gentle, kind, unostentatious methods of the sisters of charity, each of you should, and I predict will, be found by those who may require your services, an indispensable aid to the physician and a boon to the afflicted. In this connection I would emphasize what you have so often been taught, both in lectures and by daily and hourly example, namely, that your conduct and deportment toward every suffering and afflicted fellow creature, whether rich or poor, and more particularly the latter, be an exemplification of that golden rule, which, being of God, is the essence of all charity. I know of no other position in life, and I would not except even that of the physician, in which a harsh word or an unsympathetic manner may be productive of so much mischief, and certainly none which it would so ill become as that of the nurse. So, while your obligations to the sick demand that you carry out to the letter the physician's instructions, there is no good reason why your rigid adherence to duty should not be tempered with that kindness and patient forbearance of which during your studies you have seen so many noble examples in the sisters of charity. It only remains for me, then, on the part of the board of trustees and my colleagues, to tender to you our congratulations and best wishes for that degree of success which your qualifications so justly entitle you to. And as a still further mark of our confidence in your fitness for the work which you will be hereafter called upon to perform, we will now bestow upon each of you the diploma of the school and this gold medal, which it will be your privilege and pleasure to wear in a conspicuous manner, as the badge of your arduous but honorable and humane vocation.

ADDRESS OF HON. JOHN MAGUIRE.

The hospital of to-day is essentially a modern institution. Among the ancients it was unknown. The stoic philosophers regarded compassion for suffering humanity as a weakness. Human life was esteemed by them only so far as it contributed to the welfare of the state. The hospitalia of the Romans meant the rooms set apart for the comfort of guests. They were the scenes of joy and festivity, not of suffering and sickness. The Bethesda of scripture, which some have regarded as a hospital, was nothing more than a pool or fountain of water near one of the gates of Jerusalem, having porches or resting-places about it for the sick. The Roman father had entire discretion to preserve or destroy his child. Infanticide was universal in Greece and Rome. The doctrine of the survival of the fittest held undisputed sway. Under Augustus, out of a population of 2,000,000, Rome contained 500,000 paupers ; still there is no record of any asylum for the poor or sick. Crates, a philosopher of those times, showed his contempt for wealth by throwing it into the sea ; Democritus gave up his wealth that he might be free from care ; but it never occurred to these lackadaisical philosophers to found an institution for the relief of suffering humanity. Christianity came and taught a new doctrine. It taught the dignity of life and the sanctity of human suffering.

Hospitals rose on the ruins of pagan temples, so that in the ninth century the city of Rome boasted of no fewer than twenty-four hospitals. The Hôtel Dieu, in Paris, was founded in the seventh century, and is to-day the finest and largest hospital in the world. In the eighteenth century hospitals increased with great rapidity, and to-day their noble spires tower on every side, while in them skilled physicians wisely administer the remedies of science, and noble and heroic women, with almost a mother's tenderness, soothe the fevered brow of pain and softly whisper words of hope and love and joy and sunshine. What shall I say of that gentle lady who there administers to the wants of suffering humanity? What can I say that the world has not said? Wherever the human heart is bowed down in anguish and despair; wherever the human frame lies shattered and prostrate by the storms of disease and pestilence, there she is found. In the hospital ward she is a ministering angel; on the battle-field, where the wounded lie torn and mangled, far from home and from the gentle touch of loving, kindred hands, many a lion-hearted soldier-boy, wounded unto death, has with his latest strength pressed her hand in gratitude, and with his last expiring breath murmured a prayer for the gentle sister of charity. Well may we say in the words of Gerald Griffin:

> "Yet not to the service of heart and of mind
> Are the cares of that heaven-minded virgin confined;
> Like Him whom she loves, to the mansion of grief
> She hastes with the tidings of joy and relief.
> She strengthens the weary, she comforts the weak,
> And soft is her voice on the ear of the sick.
> Where want and affliction on mortals attend,
> The sister of charity there is a friend."

Young ladies, what shall I say to you? Can any feeble words of mine add to the store of wisdom and mature knowledge with which you are already armed? Shall I learnedly dwell upon the ingratitudes, the uncertainties, the insincerities of the great world upon which you are about to embark? If I did so you might say I was pedantic. You will find, however, that in this great world of ours there are two distinct and separate worlds. In one the strains of sweetest music ever fall upon the ear, bringing with them delight and intoxicating joy, the incense of pleasure pervades the air, the light and graceful step that spurns the earth and revels in the bewildering labyrinth of the dance, the sounds of careless laughter and the beatings of gay and joyous hearts that are restless as the tide, the soft pressure of the hand, the bright glance of the coquettish eye, all go to make up a world of professional pleasure and studied joy. With that world you will probably have little to do. Seated in the sick room in the silence of the night, hearing only the tick, tick, tick of the clock upon the mantel, your young natures may at times rebel and your hearts become filled with an insatiable longing to see, to know, to feel the joy and gayety of the bright world without. But stop, wait—there is another world. Here the "night is morning and the noontide night." Its only music springs from the heart whose cords are torn asunder by grief and anguish. Sickness and pain are its deities; the flushed and fevered brow is tossing on the pillow, the mind is wandering; put your hand upon his heart—the barometer of life. It is beating slowly, slowly; it trembles, wavers, stops—death—"a breathing miracle into silence passed." Where now is that dazzling belle of fashion whose every charm and grace of movement will be heralded to-morrow in the public print? Oh! she has just donned her wraps; she is about to enter her carriage; she is hurriedly uttering a few final graceful insincerities and is off to her luxurious home. Does any one ask which is the nobler? Why that young woman standing by the bed of sickness in the very presence of death seems almost Godlike in the comparison.

"Genius may
Fill with unsympathizing gods the scene,
But grief alone can teach us what is man.
The soldier rushes into battle; he kills, he slaughters,
he dies, he is a hero.
For him the poet's lyre is wreathed,
The marble wrought, the music breathed."

Is she not a heroine of a nobler type of heroism whose every effort is to preserve and not destroy the life that God alone can give? Sympathy for human suffering is one of the purest and highest emotions of our nature, and that you possess that virtue in a high degree is attested by the profession you have chosen. It is a noble Christian labor that you enter on to-night, and a womanly one. In hours of pain and sickness what sound so sweet as a woman's voice, what touch so gentle as a woman's hand, what heart so tender as a woman's heart? Bear steadfastly in mind, I beg of you, that your calling is a pure Christian labor, and not a mercenary avocation, and then not only will you be contented and happy, but you will have the precious consciousness and satisfaction of knowing that you, in this noble Christian city of Brooklyn, are doing your share to scatter at the feet of men, like flowers,

"The charities that soothe and heal and bless."

You will be told that it is a cold and calculating world. But it is a world, too, in which honest effort and real merit are always rewarded. Never forget your alma mater. Never forget the kind and learned gentlemen who have given so much time and earnest attention to your advancement, and particularly him who is your chief of staff, Dr. Byrne, whose life labors have been confined to Brooklyn, while his fame as a skilled physician and scholarly gentleman has gone all over the world. Let me in conclusion express the hope that the step you take to-night may be one in the right direction, and that success and prosperity and happy hearts and contented minds may be in store for each and all of you, bound up in the unbudded blossoms of the coming years.

VALEDICTORY ADDRESS OF MISS BLANCHE KINSELLA.

For the past two years we, the first class of St. Mary's Training School for Nurses, have been looking forward to this day, when, all the trials incident to our training over, our examinations successfully passed, our diplomas in our hands, we could each one of us say, "I am a trained nurse;" and yet to-night, when we have reached the desired goal, we wonder why we are not just as happy as we expected to be, and away down from the depths of our hearts comes the answer, because we now realize more fully the meaning of those two little words, "trained nurse," and appreciate all the grave responsibilities we take upon ourselves to-night. Trained nurse. Trained to forget ourselves, to serve our fellow-creature on his sick bed, trained to serve him generously, patiently and intelligently, trained to stand between him and the common foe—death. Is it any wonder, then, if we hesitatingly ask ourselves the question: "Am I worthy of the title?" and that our encouragement comes in the firm resolve: "If not, I will try to be." To-night, ladies and gentlemen, we wish to tell you how very proud we are of being the first class of St. Mary's Training School for Nurses. Less than three years ago our school commenced with four trembling probationers. Our work was at first confined to three wards of the hospital. Gradually, however, our duties increased, our number grew, we became, as it were, a living reality. One ward after another was opened to us, till finally we had the benefit of the experience of the whole hospital. It became then necessary for those connected with our school to consider the question of our obstetrical training, and we were much pleased when the news came that we were admitted to one of the best maternity hospitals, and that three months of our time were to be devoted to that branch of our training. Our next step was to attend the sick in their own homes. Here we had to encounter the spirit of doubt. We were something new, untried, unproven. What were our capabilities, what had been our experience? Fortune favored us, however. We succeeded so far that it became impossible to respond to all the calls we received. Mixed with the rejoicing that always attends the successful conclusion of any serious undertaking is often a feeling of void. What had been the subject of so much anxious thought, the object for which we had labored so hard, toward which all the energies of mind and body had been directed, is at last accomplished and we realize almost sadly that there is nothing more to do. But with us to-night this is not the case. We are trained, it is true, and we have this evening received our diplomas, those little documents that proclaim us capable of nursing all cases, be they medical, surgical or obstetrical; but this is only the beginning. Up to this time we have been preparing for our life work, fitting ourselves for it; yet we must ever remember that we have more to learn, more practical experience to gain, so that each year of our lives may make us more useful women, more skilful nurses. We have often been told that we must first be trained women, then trained nurses; and we do not mind confessing, public though the occasion may be, that the former is by far the more difficult accomplishment. It is a comparatively easy matter to learn the practical details of nursing, as well as the theory, or the reason why we do these things; but it is hard, sometimes very hard, to be calm and unruffled when everything seems going wrong, to smile when perhaps we are feeling discouraged, to bear patiently, in a word, the numerous little trials we meet with in the pursuit of our duties. We realize that this is a lesson we must be ever learning, without which our life as nurses would be a failure and the hours we have spent in study worse than useless. To-night is the closing scene of a period of our lives which we will always remember as one replete with numerous blessings, and we may be pardoned, perhaps, if amid this happy scene we cannot but indulge in some sad reflections. To-night we bid farewell to all who have been associated with us during the past two years. To our sisters who have not yet completed their training we wish to say that our regret at parting is softened by a knowledge of the fact that they will continue for another year to enjoy the privileges peculiar to St. Mary's Hospital. To the good sisters of charity we wish to convey our sincere thanks in so far as it is possible for words to express them, and to assure them that we appreciate most fully all that they have done to render profitable to us the two years spent in their midst. To the medical and surgical staff of St. Mary's we render our sincere acknowledgment. We thank them especially for having so generously labored for our instruction, and when in years to come we look back to the time spent in St. Mary's Hospital, their kindness will be one of our brightest remembrances. We feel that no words of ours can adequately express our appreciation of their efforts in our behalf, but we will try to give them that acknowledgment which we feel sure they most value; namely, we will endeavor so to shape our lives that every word and act of ours may prove us not unworthy nurses of St. Mary's School.

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THE MEDICAL BUREAU OF THE COLUMBIAN EXPOSITION.

This very necessary adjunct to the great fair was organized June 1, 1891. Staff: John E. Owens, M.D., Medical Director; W. H. Allport, N. R. Yeager, S. C. Plummer, Assistant Surgeons.

The Bureau took charge of medical, surgical and sanitary inspection work on the grounds July 1, 1891, and is now in active operation.

A temporary dispensary and emergency hospital has been constructed, where medical and surgical attendance and medicines are furnished to employees during the day free of charge.

The Bureau is amply equipped with instruments, medicines, operating-room furniture, stretchers, cots and an orderly. The City Police Department has furnished a patrol wagon for ambulance service, to be used until a permanent ambulance has been constructed, and the Exposition Company provides horses, harness and driver.

The present Bureau operating during the construction period will be the nucleus of the medical service of the World's Fair. It is the intention of the Medical Director to make the records of the Bureau as complete as possible from a statistical and historical standpoint, and to furnish at the close of the service a report which will be valuable in the organizations of the Medical Bureaus of future Expositions.

Present number of persons living or working on the grounds is 2,000, increasing weekly. Several accidents have already occurred, and the Bureau has had ample opportunity to demonstrate its right to existence. (Boston Med. and Surg. Journal).

Dioscorides.

DIOSCORIDES PEDANIUS.

A celebrated Greek physician and botanist. The date of his birth and death are unknown, but it is believed that he lived during the reign of Nero, in the first century.

He is said to have been called Phacas, from his face being marked with spots like lentils.

It is believed that he was attached to the army as a physician, and that he traveled over Asia Minor, Greece, Italy and part of ancient Gaul in quest of plants, and for the sake of confirming by observation what he had learned from books.

He tells us in the preface of his first book that he had consulted all who had written upon the materia medica before him ; that he had corrected many errors of others, added many new things of his own, and digested the whole into a regular order.

He has given us five books upon materia medica, containing a description of all the medicinal plants then known, over six hundred in number, distributed according to their officinal qualities into the four classes of aromatic, vinous, medicinal and alimentary vegetables.

These descriptions are chiefly taken from color, size, mode of growing, comparison of the leaves and roots with other plants well known, and therefore left undescribed. In general, the descriptions are short and frequently insufficient to determine the species, hence arise the endless and irreconcilable contentions among his commentators.

Galen pronounced the books of Dioscorides to be the best that had been written upon the subject, and it is evident that in that early stage of botanical science he was looked up to with a reverence which is no longer paid.

Besides these five books there are a sixth and seventh sometimes attributed to him, but the genuineness of them is doubted, principally because Galen takes no notice of them in several places where he could hardly be supposed to overlook them.

The writer possesses two editions of the author's works, one the elegant folio, interpreted by John Emellius, and published at Frankfort in 1549, and the other a beautiful little book, less than five inches high, the title-page of which is unfortunately lost; but both contain six books, the larger copy adorned with hundreds of cuts of the plants, etc., described.

There are besides two other books "upon simple and compound medicines easy to be come at," which have been attributed to Dioscorides, but they are supposed to be spurious, though they seem to have borne his name at the time when Ætius read them.

Several manuscripts of this author's works are in existence, that in the Imperial Library at Vienna being the most celebrated. It is illustrated with numerous figures, which are so rudely drawn that they afford little information. Haller (1708–1777) asserts that perhaps a third part of the plants of Dioscorides are still unknown.

Dioscorides and Pliny were probably contemporaneous, and though both wrote on the same subject, neither seems to have known the other, although they evidently very frequently collected their information from the same sources. J. H. H.

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Each contributor of an Original Article will receive five copies of the Journal containing his article, on application at the Rooms of the Society, 356 Bridge Street.

Electrotypes will be furnished authors free of charge, if proper drawings are provided. Electrotypes of engravings will be furnished authors at cost, when they wish to preserve them for future reproduction.

Alterations in the proof will be charged to authors at the rate of sixty cents an hour, this being the printer's charge to the Journal.

EDITORIAL.

PROGRESS IN MEDICINE.

The department of Otology will hereafter be represented in the section of the Journal devoted to Progress in Medicine, and will be under the management of Dr. J. E. Sheppard, who is well known to the profession as a specialist in this branch of medicine, being at the present time Instructor in Otology at the New York Post-Graduate School, and Assistant Surgeon at the New York Eye and Ear Infirmary and the Brooklyn Eye and Ear Hospital.

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HEALTH COMMISSIONER AND BOARD OF EDUCATION.

The principle which Mayor Boody has apparently adopted and already begun to act upon, of requiring those who have dual positions in the city government to relinquish one of them, is to be commended. We think, however, that an exception should be made in one instance and possibly in more, but of the one we have no doubt. The Health Commissioner should, in our judgment, be *ex-officio* a member of the Board of Education. The relation existing between the Health Department and the public schools is most intimate, and the influence which the Health Commissioner can exert in maintaining the schools in a proper sanitary condition is very great. It may be said that this influence can be as well exerted with the Commissioner out of the Board of Education as within it. The answer to this is that it has never been so in the past and that it is no more likely to be so in the future. The presence of the Health Commissioner in the Board would keep the two great departments in touch, and would, we are sure, be of great service to the public.

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ANNUAL ELECTION OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

At the seventy-first annual meeting held January 19, the following officers and delegates for 1892 were elected:

President, Z. T. Emery; Vice-president, John C. Shaw; Secretary, W. M. Hutchinson; Assistant Secretary, David Myerle; Treasurer, Chas. N. Cox; Librarian, Wm. W. Browning; Censors, G. R. Butler, Arnold Stub, Geo. E. Law, Joel W. Hyde, Herman Bender; Trustee, Frank E. West; Delegates to the Medical Society of the State of New York, J. A. McCorkle, Geo. McNaughton, A. J. C. Skene, John C. McEvitt, Wm. Browning, H. L. Bartlett, H. B. De La Tour, J. L. Kortright, G. R. Butler, Joel W. Hyde, W. H. B. Pratt and Gordon Hall.

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HEALTH OFFICER OF THE PORT OF NEW YORK.

Probably no more important post of duty is to be found anywhere throughout the length and breadth of this great country than that which has for the past twelve years been occupied by Dr. William M. Smith, Health Officer of the Port of New York. Many and repeated have been the attempts to replace him, but during this long period his term has been uninterrupted. It is not surprising that he should have become the target for the attacks of hostile criticism, but it is our firm conviction that these attacks have been directed against an officer who, in the discharge of his important duties, has ever been faithful to his trust. The freedom from pestilential disease which has been so long enjoyed is due in no small measure to his watchfulness and care.

We are led to make these observations because we presume that a change in the incumbent of this office is inevitable. While the position is far from being as lucrative as it was when the health officer was entitled to the fees of his office, still a salary of $10,000 a year with dwelling is not likely to go-a-begging. As the appointing power, the Governor, and the confirming power, the Senate, are in political accord, and as the politics of the present Health Officer are antagonistic to theirs, it requires no prophetic power to foretell a change in the administration at Quarantine. It is, of course, conceded that the successor to Dr. Smith will be in political sympathy with the "powers that be," but it is not too much to ask that in his selection the Governor should nominate one whose experience has been such as to enable him to administer the sanitary affairs of this great portal to a still greater country in the interests of life and of health. The responsibilities of the Governorship are great, but far more weighty are those which devolve upon the Health Officer of the Port of New York. That a competent and experienced sanitarian may receive the appointment should be the wish of every member of the medical profession, and to bring about such a result should be his earnest endeavor. Since writing the above Dr. W. T. Jenkins, Deputy Coroner, of New York, has been nominated by the Governor.

ST. MARY'S TRAINING SCHOOL FOR NURSES.

We give in another portion of this number an account of the exercises connected with the graduation of the first class of nurses from this institution. These nurses have had most admirable opportunities for obtaining the best of training in their profession, especially in obstetrical nursing, and we are informed that especial pains have been taken to instruct them in the care of patients upon whom laparotomy has been performed. The addresses delivered at the commencement exercises by Dr. John Byrne and others, which we publish will be found not only interesting but also instructive reading. That the Training School is a success there can be no doubt. Sixteen nurses now compose the next graduating class.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the rooms of the Society, 356 Bridge Street, on Tuesday evening, December 15, 1891, at 8 o'clock.

Dr. West in the chair.

There were about one hundred members present.

The minutes of the November meeting were read and approved.

The Council reported favorably upon the application of Dr. Heydon Starrett, and recommended that he be elected to membership. The following applicants, having been favorably reported upon by Council, were declared members of the Society :

Drs. Joseph Wesley Malone, Anthony J. Berger, Frank S. Millbury, Burr B. Mosher and A. H. Brundage.

SCIENTIFIC BUSINESS.

Report of the Committee on Practice and Therapeutics.—The Chairman, Dr. Francis H. Stuart, presented the first paper, entitled "Some Principles of Therapeutics Based upon Recent Medical Progress," which was discussed by Drs. Conkling and Evans.

Dr. Arnold W. Catlin presented the second paper, entitled "Medical Notes in the Sick Room."

Dr. Alex. Hutchins completed the third division of the program by briefly narrating his observations on, and practically demonstrating the application of, the "Cotton Poultice in Pneumonia."

APPLICATIONS FOR MEMBERSHIP.

The following applications for membership were presented :

Drs. L. G. Langstaff, 109 Lincoln Place, Toronto, 1884 ; proposed by Dr. Wm. C. Braislin, Dr. W. B. Chase.

P. Edwin Kidd, 173 Willoughby Avenue, Queen's Coll., Kingston, Canada, 1878 ; proposed by Drs. Jos. A. Kene, W. M. Hutchinson.

Leon Louria, 279 Hewes Street, Univ. of Moscow (Russia), 1889 ; proposed by Drs. J. H. Raymond, Geo. McNaughton.

Dayve Barisowitz ze Waltoff, St. Cloud Villa, Bath Beach, L. I. Imperial Univ. of St. Vladimir, Russia, 1887 ; proposed by Drs Raymond and McNaughton.

Marian Pyles, 427 Nostrand Avenue, Med. Dept. Howard Univ. (Washington), 1888; proposed by Drs. Raymond and McNaughton.

Geo. T. Kemp, 171 Joralemon Street, L. I. C. H., 1891; proposed by Drs. Raymond and McNaughton.

Benj. Houghton, corner St. Marks and Bedford Avenues, Univ. of N. Y., 1890; proposed by Drs. Geo. D. Barney, W. B. Rickard.

Evan F. Smith, 177 Putnam Avenue, Natl. Coll. Columbian Univ., Washington, 1877; proposed by Drs. D. Myerle, W. M. Hutchinson.

The matter of providing larger and more suitable accommodations for the Society was brought up by Dr. Raymond, who moved that a committee be appointed to raise the necessary funds to make such improvements. Seconded.

Considerable discussion ensued as to the nature of the proposed improvements, whether they should contemplate an enlargement of the present building or construction of a new one, and whether the citizens of Brooklyn and residents of the county should be asked to contribute to the erection of a suitable permanent home for the medical profession of Kings County.

Dr. Brush moved as an amendment, "that the matter be referred to the Board of Trustees for consideration, with the request that they report at the February meeting some suitable plan of procedure." Seconded.

Dr. Raymond withdrawing his motion, the amendment was put and carried. So ordered.

Dr. Walter B. Chase gave notice that he would move at the next meeting the following amendments to the By-laws:

Proposed amendments to allow Corresponding Members:

To amend Chapter I, Section 1, to read: "It shall consist of Resident, Non-Resident, *Corresponding* and Honorary Members."

To amend title to Chapter XIV. to read: "Resident, Non-Resident, *Corresponding* and Honorary Members."

To amend Chapter XIII., Section 1, to read: "*All* members shall consist of physicians and surgeons only."

To add a new section to Chapter III., it being Section No. 9, viz.: "*Reputable physicians residing outside the limits of the County of Kings may become Corresponding Members under the same rules as Resident Members.*

Such members shall not be entitled to vote or hold office, but in all other respects shall enjoy the same privileges as Resident Members."

To amend first line of Chapter XIV. to read: "Every person thus admitted, *Resident Member*, shall, etc."

To add to Chapter XIV. a new section, it being Section No. 5, to read as follows: "*Every person thus admitted Corresponding Member, shall, within six months after due notification of his or her election, pay an initiation fee of three dollars or forfeit the election.*"

To amend Chapter XVI, Section 1, second line, to read: "assessments on Resident *and Corresponding* Members as shall meet its requirements."

The Chair announced the death of Dr. Frank W. Fleischhauer, and appointed the following obituary committee: Drs. Wm. M. Hutchinson, Louis M. Dusseldorf and C. E. Gunther.

NOMINATION OF OFFICERS FOR THE ENSUING YEAR.

For President, Dr. Z. T. Emery, Dr. Francis H. Stuart; Vice-President, Dr. Jos. H. Hunt, Dr John C. Shaw; Secretary, Dr. Wm. M. Hutchinson; Assistant-Secretary, Dr. D. Myerle; Treasurer, Dr. Chas. N. Cox, Dr. Wm. Maddren; Librarian, Dr. Wm. Browning; Censors (board of five), Dr. Arnold Stub, Dr. Glentworth R Butler, Dr. R. L. Dickinson, Dr. Geo. McNaughton, Dr. Jas. W. Fleming, Dr. Fred. D. Bailey, Dr. Joel W. Hyde, Dr. J. L. Kortright, Dr. Geo. E. Law, Dr. Geo. N. Ferris, Dr. Herman Bender, Dr. Geo. A Evans, Dr. G. W. Brush; Trustee (one vacancy), Dr. Geo. R. Fowler, Dr. Frank E. West, Dr. D. G. Bodkin; Delegates (12) to State Medical Society, Dr. J. A. McCorkle, Dr. Reuben Jeffrey, Dr. Geo. McNaughton, Dr. H. L. Bartlett, Dr. R. L. Dickinson, Dr. Ernest Palmer, Dr. A. J. C. Skene, Dr. G. R. Butler, Dr. H. B. De La Tour, Dr. J. M. Winfield, Dr. Frank Baldwin, Dr. J. W. Hyde, Dr. A. W. Catlin, Dr. W. H. B. Pratt, Dr Wm. Browning, Dr. D. Myerle, Dr. John C. McEvitt, Dr. H. D. Bliss, Dr. J. L. Kortright, Dr. Richmond Lennox, Dr. O. A. Gordon, Dr. Gordon Hall, Dr. G. W. Brush.

On motion of Dr. W. B. Chase, Dr. G. R. Butler was unanimously elected a Delegate to the Medical Society of the County of Queens.

Dr. Wm. Maddren gave notice that at the next meeting he would move an amendment to the By-Laws to provide for the election of trustees by a majority vote, instead of two-thirds, as at present, viz:

Amend Chapter X., Section 2, to read: "The five Trustees shall be elected by a *majority* vote of the members present, etc."

There being no further business, on motion, the meeting adjourned.

W. M. HUTCHINSON, *Secretary.*

BROOKLYN SOCIETY FOR NEUROLOGY.

The regular monthly meeting of the Brooklyn Society for Neurology was held at the rooms of the Medical Society of the County of Kings, 356 Bridge Street, Wednesday evening, December 9, 1891, at 8.30 o'clock.

The President, Dr. Chas. Corey in the chair. Members present, Dr. John C. Shaw, Wm. T. Lloyd, Wm. Browning, C. F. Barber and Thos. L. Wells.

SCIENTIFIC BUSINESS.

Dr. Wells presented clinical case—male, age 48. Three years ago, after prolonged drinking, had an attack of paraplegia, being confined to his bed for six months; was delirious a portion of the time; symptoms gradually improved so he is now able to walk about, but has not been able to work; spends much of his time reading; is morbidly suspicious and irritable; sexual function lost; complains of pain in legs and weakness upon slight exertion; tendon reflex and sensibility normal; had syphilis twelve years ago.

Dr. Shaw thought case was originally one of alcoholic paraplegia and would probably result in permanent mental and physical incapacity. Dementia already established. Case was also discussed by Drs. Lloyd, Corey and Barber. The latter considered patient's gait characteristic of alcoholic disease. Dr. Shaw did not consider the loss of sexual function as any indication of extensive organic changes in condition, as this symptom was liable to follow almost any severe illness. He suggested the use of strychnia as of possible benefit, and Dr. Corey suggested small doses of bichloride of mercury with strychnia.

Dr. Barber reported interesting case of tubercular meningitis. The patient was a boy seven years of age; tubercular history and alcoholism on father's side. Case was of peculiar interest on account of the rapidity with which symptoms changed at times; cephalic cries were frequent, and towards end coma and hemiplegia. Case discussed by all the members present.

EXECUTIVE BUSINESS.

Dr. Lawrence Coffin was elected a member of the Society.

Dr. Charles Corey was elected President for next year, and Dr. Thos. L. Wells, Secretary and Treasurer.

THE KINGS COUNTY MEDICAL ASSOCIATION.

The February meeting of this Association will be occupied by the reading of a paper by Dr. J. D. Rushmore on "Anæsthesia with Ether."

All regular practitioners of medicine and medical students are invited to attend the meetings and participate in the discussions and to remain as guests of the Association after the meeting.

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PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

HÆMORRHAGE FROM THE ANTERIOR URETHRA FOLLOWING URINATION.

Jules Janet (France méd. 1891, No. 23). Attention is called to the special forms of hæmorrhage occurring during the employment of urethral injections, and particularly when solutions of potassium permanganate are used. It is to be discriminated from vesical hæmorrhage by attention to the following points: It quite constantly appears at the end of urination, and consists of a small quantity of blood added to the last few drops of urine. If during the act of urination the patient interrupt the stream, after each such interruption a few drops of urine colored with blood, or blood alone, will appear at the meatus. Should, however, the hæmorrhage arise from the bladder, the blood will only appear when the latter organ is completely emptied.

THE DROP BY DROP METHOD OF ADMINISTERING CHLOROFORM.

Brandt (Centralblatt f. Chirurgie, No. 47, 1891). Two communications appear in which especial stress is laid upon this method of administering chloroform. Zuckerhandl claims that the method has been extensively employed in Dillel's clinic at the Vienna General Hospital with excellent results. Brandt states that Lauenstein, in the Sailors' Hospital at Hamburg, has used the same method for six years without a single accident occurring in consequence of the use of this anæsthetic agent. Only in rare cases is morphia used in connection with chloroform anæsthesia.

DORSAL RESECTION OF THE CARPUS.

R. Gritti (Gazz. de ospit. April '91, No. 12). The trapezium and metacarpal of the thumb are preserved, thus insuring a useful thumb. Operation: Two longitudinal incisions are made, the radial beginning 2 cm. above the styloid of the radius and ending 2 cm in front of the basis metacarpi indicis upon the outer side; the ulnar incision is of the same length, placed upon the ulnar edge of the dorsum of the hand. These are connected by a cross incision at their middle portion. This latter divides the extensor tendons with the exception of the extensor pollicis longior, which is kept out of the way by means of retractors, and the extensor carpi radialis, and which are separated at their insertions. The divided tendons are secured temporarily by threads, both to prevent undue traction and to serve for their identification later on in the operation. The ends of the bones are then sawn across, somewhat obliquely, in such a manner that a larger piece is removed from the ulna than from the radius. Separation of the wrist-joint from the dorsal surface is now accomplished, care being exercised to prevent opening of the sheaths of the flexor tendons. Some difficulty may be experienced in the separation of the pisiform and unciform bones. The joint is opened between the trapezoid and trapezium, the latter is left in *situ* and the parts are dissected beyond the bases of the four metacarpal bones. These are sawn off from the dorsal side about 1 cm. beyond the carpo-metacarpal articulations. In adapting the resected surfaces the radius is attached to the second and the ulna to the fourth metacarpal bones by wire sutures. The tendons are reunited, being placed so as to overlap each other about 2 cm. by sutures. The skin-wound is now sutured and dressings and splint applied. In spite of the fact that the wire sutures were left in position for upwards of two months, it would appear, in some of the cases recited, that an artificial wrist-joint was secured. (See Hoffman's Operation, Med. Wochenschrift, 1890, No. 52).

POSTERIOR ABDOMINAL SECTION.

Adolph Maass (Deutsche Zeitschrift für Chirurgie, Vol. XXXII., p. 221). Preliminary resection of the coccyx and sacrum as introduced by Kraske for carcinoma of the rectum has been variously modified, Hochnegg and Bardenheuer extending the restriction to the third sacral foramen. Rose amputates the sacrum at the level of the great sciatic notch, after turning back the soft parts by a cross incision through the second sacral foramen by means of strong bone-cutting forceps. The sacral canal, together with the nerves of the cauda equina are cut across. In this manner easy access is gained to the organs of the pelvis, and those of the abdominal cavity. Hæmorrhage is strikingly slight, which is probably due to the compression exerted by the bone forceps. No inconveniences seemed to have arisen from the severing of the cauda equina in the six cases operated upon. These operations were performed in three cases for carcinoma of the rectum or sigmoid flexure, of which one died, and three times for carcinoma of the uterus, otherwise inoperable, of which two died.

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OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

SUBLIMATE INTOXICATION.

Gebhard (Zeitschr. f. Geb. u. Gyn., B. XXI., H. 2). Lomer published the first case of sublimate poisoning in 1884. Fatal cases from too free and too long continued douching were subsequently reported by several authorities. Mikulicz at about this time pointed out the fact that sublimate suffered decomposition from contact with albuminous fluids. The danger of sublimate and the doubts as to its germicidal power then had the effect to define its dosage and to limit its applications.

Great difference of opinion has prevailed as to the symptomatology and anatomical lesions of sublimate poisoning. It is a common error to assume that stomatitis and salivation are the first signs of mercurial intoxication, as is true in inunction cases, whereas the first and most common symptom is diarrhœa. The second important effect is upon the uropoetic system, and stomatitis is the third.

Among the constitutional symptoms are headache, vertigo, occasional drowsiness, restlessness, anxiety, now and then euphoria and sense of oppression, sometimes hyperæsthesia. Temperature subnormal, pulse accelerated, compressible, often irregular; erythema seldom noticed. Marked anatomical changes are constantly found post mortem in the intestines and kidneys. Since quicksilver is constantly present in the stools, it may be assumed that the effects of sublimate are produced by its cauterant action on the mucous membrane. More important than the intestinal lesions are those of the kidneys. The kidneys are always diseased in fatal cases, sometimes to the extent only of swelling and fatty degeneration of the parenchyma. Calcareous deposits in the cortex are common. There are three possible explanations of these deposits. 1st, abnormally increased calcareous secretion; 2d, necrosis with subsequent petrifaction of the elements themselves; 3d, development of veritable bone tissue. This latter, however, can be excluded. The author holds, from the study of a case which he reports, that the calcareous deposits in question are the result of a cretification of the epithelium of the urine canals.

Intact kidney tissue is rarely present. When the foregoing changes are not found the epithelium is mostly in a condition of parenchymatous inflammation. He could discover no change in the vasa vasorum. Some exudation is frequently found in the glomerulus capsule. There is no increase of interstitial tissue. The intertubular capillaries are the more engorged the nearer the surface they are. In many cases they are irregularly dilated, forming ampullæ, but without coagulation of their contents.

THE DIAGNOSIS OF EARLY EXTRA-UTERINE PREGNANCY.

Dr. J. Halliday Croom (Ed. Med. Jour., Oct. 1891) discusses the possibilities of diagnosis in the early months of ectopic pregnancy. His general conclusion is that, in cases seen early and watched carefully, a diagnosis may be made with a good deal of precision on the following four grounds:

1. The general signs of pregnancy.
2. The displacement of the uterus to one side by a tumor, which gradually grows.
3. The passage of the decidua, in whole or in part, and irregular hæmorrhages.
4. Paroxysmal pain localized to one side though not to one spot.

He attaches much diagnostic value to the passage of the decidua.

Two cases among others are related in the paper as illustrating the difficulty of diagnosis occasionally encountered. The first, a multipara of 32, who had missed a menstrual period, was seized with violent pelvic pain followed by slight genital hæmorrhage and collapse. The abdomen was opened on the diagnosis of ruptured ectopic pregnancy. The peritoneum was filled with blood, but no evidence of a gestation sac could be found. The abdomen was closed and the patient died from continuance of the hæmorrhage, the source of which had not been discovered.

In another case a woman who had borne one child had suffered several weeks from irregular hæmorrhage, previous to which the menses had been suppressed for two months. She complained constantly of spasmodic pains in the right side. The uterus was enlarged, displaced to the left and the os patulous. The right side of the pelvis was occupied by a tumor which was elastic, tender, pulsating, growing, and over which a well marked *bruit* could be heard. On opening the abdomen the tumor proved to be an enormous hæmatosalpinx, in which no trace of fœtal structures could be found after the most careful examination.

[The conditions found in the latter case were not inconsistent with the assumption of early tubal pregnancy in which the ovum had been absorbed, as the author grants may have been the case. Even in the first case, the correctness of the diagnosis is by no means disproved by anything that appears in the findings. J.]

PREVENTION OF PERITONEAL ADHESIONS.

Dr. R. T. Morris (N. Y. Med. Rec., Oct. 10, 1891) finds an aristol film effective in preventing secondary peritoneal adhesions. He has used it successfully in several experiments on rabbits and in one case of abdominal section on the human subject.

RUPTURE OF THE UTERUS IN VERSION FOR PLACENTA PRÆVIA.

Lomer (Br. Med. Jour., Dec. 5, 1891). After a series of twenty-seven cases of placenta prævia treated successfully by combined version without immediate extraction, reports a case of death from rupture of the uterus. The head was in the first position, placenta to the left, the cervix dilatable and almost effaced, and the uterus tense. Violent pains set in after version, and two hours later, when the child had been expelled spontaneously as far as the navel, the uterus ruptured. The laceration began apparently at the placental site and extended transversely, nearly separating the uterus from the vagina. Lomer believes that a partial rupture took place during the turning and was rendered complete by the subsequent violent pains. This experience leads him to doubt the safety of the expectant treatment as a routine practice in placenta prævia.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

TRENDELENBERG'S POSITION AND CATGUT IN HYSTERECTOMY.

Goodell (Journal Gynæcology and Paed., Nov., 1891) having spent a month in Berlin the past summer, was struck with two things—the use of catgut and Trendelenberg's position. He had always been afraid that catgut was too short-lived for the short veins of the pedicle, but realizing the risk of fistulous tracts from silk ligatures he has resorted to it successfully in two cases of vaginal hysterectomy. Here the loop is absorbed, and the knot falls off or is absorbed.

He has resolved to restrict himself to gut in all abdominal work. The Trendelenberg position is of great advantage in certain operations in the pelvis, for instance, in the deeply seated and fixed ovaries and tubes in which hæmorrhage may occur, and the patient is weak and cannot bear the loss of blood. In the operations he saw by Dr. Martin and his assistants there was no protrusion of the intestines, the recti muscles were flaccid and one could see what one was doing. He, G., had recently used this position in a lady greatly reduced, weighing only eighty pounds, from large pus tubes and abscesses of the ovaries, knowing they were formidable, and desiring the loss of blood to be small; by it he was able to see clearly what he was doing, and to arrest every bleeding point immediately.

STERILITY IN THE NULLIPARA.

Dr. John Duncan Emmet (N. Y. Journal of Gynæcology and Obstetrics for November, 1891) divides *sterility in the nullipara* into four classes:

1. When menstruation has never appeared and the uterus and ovaries, one or both, are absent or undeveloped. These cases are sometimes the result of pelvic inflammation early in life, whereby the organs are hopelessly bound down with fibrous tissue and their later development is impossible.

2. "Cases in which there is partial or complete destruction of the parenchyma of the ovaries, or of the tubes, due to repeated attacks of peritonitis, either gonorrhœal, simple or from some other cause."

The temptation is very strong in these cases to resort to Tait's operation. He maintains that a tube should be at once removed if pus is found in it. It has been found, however, in the experience of many physicians that a diseased ovary, as well as tube, may in many cases be cured without resorting to radical measures.

Ovaries that are sensitive and prolapsed may, by the faithful and patient use of wool pads, be lifted into their normal place in the pelvis, where their disturbed circulation may be restored, and their weight diminished until they no longer require support to keep them in position.

Where the ovaries are partially diseased it is the surgeon's duty to puncture cysts, or even to cut away a part of the organ, leaving the healthy part to do its work.

There is even less excuse for removing the appendages on both sides because of disease on one side only. If gonorrhœa is the source of the mischief, the urethra of the husband should be looked at often and relieved of any old strictures which may be found. If he can be kept in the ways of moral rectitude the healthy tube may be saved.

3. Cases where there have been former pelvic inflammations, or are at present subacute inflammation of the broad ligaments (one or both) or of the utero-sacral folds, and without the ovaries or tubes becoming involved. There is always displacement of the uterus. Many of these patients become pregnant after the anteversion of the uterus has been relieved. Anteflexion just above the internal os is found in every case, an evidence of congestion of the peri-uterine tissues resulting from inflammation. If inflammation or congestion of the uterine ligaments can be detected, it should be treated first of all. In some cases the anteflexion may be relieved by using a soft rubber ring, the use of glycerine and iodine should be continued to relieve the congestion of the uterine veins.

The normal function of the glands of the uterine canal should, if possible, be restored, as in most cases a plug of acid mucus is found in the canal, which is of itself a bar to conception. The use of the dull curette may be called for. If the discharge is only moderate, Hank's graduated dilators in many cases will prove of value. After the secretion becomes normal a hard rubber pessary (Emmet's) should be inserted. As soon as possible after menstruation the vagina and uterine canal are thoroughly cleaned, and in both are placed some pledgets of cotton saturated with some alkaline solution. The patient is then instructed to go home remove the cotton, take an alkaline douche and have immediate sexual intercourse with her husband. The intercourse and alkaline douche should be continued at proper intervals for several days.

4. Cases with or without anteflexion, which show a marked irregularity of menstruation, with a marked tendency to become corpulent.

E. believes many of these cases to be due to over-morbid stimulation during school life. He uses frequent applications of the faradic current, iodine and glycerine, hot-water douches, hot foot-baths and flaxseed poultices over the lower part of the abdomen for several days before the time for the menstrual flow to begin. Treatment has to be continued for a long time.

PREVENTIVE MEDICINE.

BY E. H. BARTLEY, M.D.,

Professor of Chemistry and Toxicology, and Lecturer on Diseases of Children, Long Island College Hospital.

A CHEAP DISINFECTANT.

Nitrate of lead is the cheapest disinfectant known that fulfils its intent. It does not, however, prevent putrefaction. The chloride of lead is much more effective in all directions. It is made by dissolving a small teaspoonful of the nitrate of lead in a pint of boiling water; then dissolving two teaspoons of common salt in eight quarts of water.

When both are thoroughly dissolved mix the two solutions. When the sediment has settled you have two gallons of clear fluid, which is a saturated solution of chloride of lead in water. A pound of nitrate of lead will make several barrels of the liquid and costs from eighteen to twenty-five cents at retail. (Annals of Hygiene, Nov. 1891, p. 607).

ARSENIC IN COMMON LIFE.

This was the subject of a recent address by Prof. C. F. Chandler before the Academy of Medicine, and abstracted in the *Medical Record*, Nov. 28, 1891. He took the ground that there is no danger to be feared from arsenical poisoning from living in rooms papered with arsenical wall-papers; that the quantity of arsenic that could be given off by such a wall-paper could not possibly do any harm. He gave a critical review of the various cases that have been collected by the Board of Health of Massachusetts, in which he finds no proof of arsenical poisoning.

He could find no record of a case of arsenical poisoning in any of the factories where arsenical wall-papers are made. He said that the symptoms of arsenical poisoning are not so specific that physicians could usually make a positive diagnosis of arsenical poisoning.

Incidentally he remarked that there should be a law prohibiting undertakers from using arsenic in the embalming process.

FALLACIES OF VEGETARIANISM.

This is the subject of an article in the *Sanitary Inspector* for August 1891, abstracted from the *Sanitary Era*. The author, Dr. C. R. Drysdale, reviews the principal arguments against a pure vegetarian diet. He calls attention to the fact that prehistoric man ate the flesh of animals, as shown by the remains discovered in their dwellings. He notes the fact that the Laplanders and other tribes of people dwelling on the shores of the Arctic Ocean live almost exclusively on meat, and are remarkably free from disease. Moritz Wagner is quoted as saying that everywhere where meat is unattainable, the albuminous seeds of leguminous plants are greatly used, and where rice is the chief food the culture of fish is assiduously practiced. Among the natives of Africa, Livingstone found that those tribes who ate meat bore fatigue and hunger better and withstood the fevers better than those who lived on a pure vegetable diet. Similar observations of Wagner in Central America, Tommasi in Italian rice fields, Werniclus in Japan and others are quoted to show that a vegetable diet produces a weakly race of people incapable of energy or endurance. Bouchardat says that the nations of Europe might be gauged as to their energy and capacity for endurance, by the quantity of animal food they eat. Statistics show that the English people consume the largest *per capita* amount of meat of any of the European nations—being 114 pounds per annum per head, as against 26 pounds in Italy. Dr. Riaut found that English workmen could do more work with less fatigue than French laborers. The French workmen when put upon English diet soon accomplished as much and sometimes even more than the Englishmen. As a matter of history and experience, then, the arguments for a mixed diet are conclusive. The anatomical argument is based principally upon a comparison of the length and size of the digestive tube. In the lion the digestive tube is but three times the length of the body, while in the sheep it is twenty-eight, and in man six times the length of the body.

The weight of the digestive organs in the herbivora is from 15 to 20 per cent. of the body weight, while in the carnivora it is 5 to 6 per cent., and in man 7 to 8 per cent.

In workhouses and asylums the diet is often too low in albuminous principles, and attacks of scurvy are common. The nitrogenous portion of vegetable foods is not as readily or completely digested as in meats. Ruber, of Berlin, found that practically all, or 98 per cent., of the nitrogenous part of meat, eggs and cheese is digested and used in the body, while in a diet of white bread 19 per cent. escaped digestion; 25 per cent. of the nitrogen of rice, from 17 to 28 per cent. of that in peas, 32 per cent. of that of black bread and 32 per cent. of that of potatoes escaped digestion.

The digestive organs of man are not capable of holding a sufficient quantity of these foods to get the required amount of nitrogenous elements, nor active enough to extract it from these articles of diet. The praise often bestowed upon whole-meal bread as compared with ordinary white bread is wholly unmerited. The coarser the flour the more difficult is it of digestion. The presence of bran in bread made of unbolted flour causes a great portion of the flour to escape digestion.

The advice, then, to use bran in making bread is not only useless but injurious. A curious fact determined by German chemists is, that the albumen of leguminous plants, when cooked in the natural state, or unground, affords only 53 per cent. of digestible albumen; while not less than 92 per cent. of lentil flour is digested.

The experience of ages, anatomy, chemistry and physiology affirm that vegetarianism is a dream.

PATHOLOGY.

BY JOSHUA M. VAN COTT, JR., M.D.,
Pathologist and Professor of Histology and Pathological Anatomy, Long Island College Hospital;
Director of the Department of Histology and Pathology, Hoagland Laboratory.

ON HÆMI-ALBUMINURIA.

Stokvis (Weekbl. van het nederl. Tidschr. vor Geneesak, 1891, II., No. 2). The urine coagulates at 53–55° C. Held at this temperature for some time and then filtered, it still contains albumen, which coagulates again at higher temperature, etc.

The urine thus freed from coagulable albumen contains still albumen which does not coagulate with heat, but only on addition of NaCl and acetic acid hot, or HCl cold. If the urine is slowly heated to boiling, the coagulum clears up and redeposits on cooling. This form of albumen can be regarded as true hæmi-albumen. The urine has still the property that, after treatment with strongly concentrated vegetable or mineral acids, it becomes slowly converted into a jelly-like mass, which again becomes a clear liquid on heating, coagulating slowly on cooling.

The urine came from a strong man aged 30 or 40, who suddenly suffered with pain and difficult motion of the upper extremities.

After some weeks small swellings appeared on the forehead, nasal and side cheek bones, springing apparently from the bone.

These appearances are to be attributed to the presence of a tumor similar in character to the smaller ones in the cervical vertebræ.

Evidences of osteomalacia, such as described in the literature of former cases of hæmi-albuminuria, were wanting in this one. Hæmi-albuminuria is, therefore, a sign of lesion of the osseous system, probably of a new formation in the bone marrow.

OVER A BLOOD FINDING IN PURPURA HÆMORRHAGICA.

Spietschka (Archiv. f. Dermatol. u. Syph. 1891, Hft. 2). In two cases of purpura hæmorrhagica Spietschka found a great number of nucleated red blood corpuscles after the time of a series of profuse hæmorrhages.

Because normally nucleated red corpuscles are almost never seen in the blood, and are also absent in numberless examinations of patients with other diseases, the author correctly supposes that the findings are peculiarly related to the purpura. He believes that in these two cases an exceedingly rapid regeneration of the red blood corpuscles and hæmoglobin has occurred.

The appearance of nucleated red corpuscles in the circulation is in relation to the regeneration of the same. These are still "unripe" corpuscles which have gained entrance too young into the blood channels.

PRIMARY SARCOMA PULMONALIS.

Schech (Deutsche Archiv. f. klin. Med., Bd. xlvii., p. 411). The rarity of primary pulmonary sarcoma induces the publication of this case. Patient, male, aged 57. First symptoms hæmoptysis. Pulmonary embolism was suspected because of slight right heart hypertrophy. Not until one and a half years did physical pulmonary sæmiology first appear, and at the end of three years the case died.

Section showed primary sarcoma in the lung and secondary nodules in pleura, spleen and vertebræ.

MULTIPLE SARCOMA, WITH PERNICIOUS ANÆMIA AND CONCOMITANT LEUKÆMIA.

G. Lazarus (Inaug. Diss., Berlin, 1890). G. Lazarus reports clinical history of a 30-year-old patient with the sæmiology of pernicious anæmia; marked paleness, weakness, pains in bones, dyspnœa and characteristic blood findings (poikilocytosis, nucleated red cells), fever, pleuritis. Shortly before death, increase of white blood corpuscles, splenic dulness increased. Eleven days before death multiple dermal neoplasms and thickening of the bones in the left axillary line.

Section confirmed the diagnosis, and further showed neoplastic formation in numerous glands—pancreas, salivary and mucous glands. He is only able to find four similar cases on record. In these four cases the tumors had the structure of lymphosarcoma, while his patient's tumors had a large cell which evidently originated from the fixed connective tissue corpuscles.

ON THE PROGNOSTIC SIGNIFICANCE AND ÆTIOLOGY OF ALBUMINURIA IN DIABETES.

R. Schmitz (Berlin. klin. Wochenschr., 1891, No. 15). R. Schmitz finds albumen in 824 out of 1200 cases of diabetes from nerve traces to 0.1–0.4 per cent. and more.

Daily quantity of urine in general greatly increased, or normal; specific gravity mostly between 1019–1026, often more; reaction only neutral, or alkaline in combination with cystic catarrh, otherwise acid.

The above albumen percentage is higher than before known. Nineteen of these cases were complicated, with severe general œdema, and to be regarded as due to direct renal lesions; in nearly all of these the ætiological factors lay in general tuberculosis, cardiac failure or amyloid.

For the overwhelming remainder of cases Schmitz supposes "textural" disease of the kidney must be at hand, and the albuminuria is therefore a relatively harmless symptom. Uræmia was never observed in these cases. In two autopsies normal kidneys were found where *intra vitam* diabetic albuminuria obtained. No proportional relation between the so-often-present œdema of face and ankle-joints in diabetes and the albuminuria was found. This symptom was found 32 times in the 824 cases with, and 20 times in the 376 cases without, albuminuria. He regards the cause of the albuminuria, aside from the cystitis due to sugar fermentation in the bladder, to be the anti-diabetic *régime*—the diet persisted in for years of rich quantities of raw and cooked albumen. The escape of albumen through the tubuli uriniferi is the result of the nutrition disturbance thus induced in the renal epithelium, the consequent easier desquamation of the same and poorer regeneration.

In only four cases out of 206 on anti-diabetic diet for over two years, was he able to eliminate albuminuria from the sæmiology. In these the diabetis was of 3 to 6 years' standing; but in opposition to the others they had aversion to eggs and egg-foods. Also, doubtless, patients suffering with diabetes for a long time show no evidence when first examined of albuminuria. Schmitz himself has seventeen cases to prove this statement. Nine of these patients again seen by him, after prolonged treatment, had albuminuria. This disappeared with varying rapidity greatly or completely after removal from the diet, to recur again on renewal of the same.

OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

Assistant Surgeon, Brooklyn Eye and Ear Hospital.

THE ORIGIN OF INFLAMMATION AND THE ACTION OF AGENTS EXCITING IT.

(Continued.)

That certain substances, such as mercury, which are usually regarded as insoluble under ordinary bodily conditions do produce intense purulent inflammation may be explained by their not being absolutely insoluble, the small quantity actually dissolved sufficing to excite the inflammation. Among the poisonous metals mercury ranks first. Metallic copper, on account of its greater solubility, has nearly as marked an action in producing inflammation as mercury, while metallic lead is much less active owing to the great insolubility of its carbonate, although solutions of lead are as poisonous as those of copper. Even silver and gold are to a certain extent soluble and capable of producing inflammatory reaction.

For substances insoluble in water, oily fluids, extension to neighboring parts is the result of a partial emulsification which is favored by the alkaline quality of animal fluids. Chemical elements or compounds, either in solution or fine division, spread in the fluids and tissues of the body and produce within a certain area necrosis and inflammation. The nature of the chemical process resulting in this injury of tissue is as yet unknown. A comparison of agents and results shows that it can be neither an oxidation nor a reduction, and the most plausible theories for certain substances prove themselves untenable for others. The possibility of a catalytic action has to be considered, by which simple contact with the substance concerned suffices to excite inflammation without its solution. One might thus explain the fact that metallic copper in the anterior chamber causes suppuration by direct contact with the iris, but not when it is embedded in the lens and simply projects from it into the chamber. This cannot, however, be the true explanation, as copper in the cornea will produce hypopyon in the anterior chamber, and Leber has shown that if a glass tube containing a small piece of copper be introduced into the chamber the tube becomes filled with pus, although the copper only comes in direct contact with the aqueous humor. He would explain the absence of inflammation when the copper is in the lens by the immediate combination of the small quantity of metal dissolved with the albumen of the lens, the result being an insoluble and inert compound.

Since a condensation of gases may occur on the surface of solid bodies, one might ascribe the inflammatory powers of apparently insoluble substances to this circumstance. It could only depend upon the action of condensed oxygen. Experiments have, however, shown that such an action is highly improbable, as might be supposed from the absence of harm following the entrance of air into the anterior chamber.

The power of certain chemical substances, even in very small quantity, to produce inflammation suggests the possibility of their action as ferments rather than by direct combination. In fact active inflammation may be caused by various ferments developed within the body. Still it is a question whether such be not rather a necrosis due to the digestive action of the ferment than an actual inflammation. Other ferments may have no marked local effects on account of their rapid absorption. Should, however, further experiments establish a phlogogenetic action for certain ferments, it would still be without importance for the general explanation of inflammation, since the remaining excitants of inflammation do not act as ferments and since their action is not checked by a boiling temperature. One would certainly go too far to regard as ferments all substances capable of producing poisonous effects in very small doses.

Finally, no essential phlogogenetic effect can be ascribed to the influence of these substances in retarding fibrin coagulation, as Scheuerlein has maintained.

While at present a definite chemical principle of action cannot be credited to the various phlogogenetic agents, they have in common the power of producing in sufficient concentration the death of the tissue elements, and in less strength, of acting as irritants. The strongly phlogogenetic substances may, therefore, be regarded as cell poisons, whose action within certain limits is to excite a defensive reaction on the part of the tissue elements. The strength of this resistance will naturally depend upon the degree of injury which the substance can produce upon the body. Very slight concentrations of active substances do not actually injure the tissue elements, but only excite those special evidences of life which we call inflammation. Similar to this is the effect of those substances which even in strong concentration are not directly injurious to the tissues, but whose removal as useless foreign material is desirable. Such substances act in a similar way to the weaker concentrations of the real phlogogenetic agents, and the inflammation excited is Nature's way of accomplishing their removal. This view does not exclude qualitative differences in action between the different substances, as between mercury and croton oil, the former producing little reaction with marked suppuration, and the latter, active hyperæmia and an exudation more sero-fibrinous than purulent.

Not alone the necrosis, but also all the various reactive processes accompanying inflammation, are to be regarded as the direct results of the action of the foreign material which has entered from without. For purulent inflammation at least, Leber does not believe that the toxic substance first causes necrosis, which in turn excites suppuration along the line of demarcation, but rather that the latter as well as the former is directly dependent upon the toxic action of substance introduced.

(To be continued.)

DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

Attending Physician, Department Throat and Nose, Dispensary of L. I. C. Hospital; Instructor in Diseases of the Throat and Nose, New York Post-Graduate Medical School and Hospital.

GARGLING: ITS PROPER METHOD AND USEFULNESS—H. L. SWAIN.

The following procedure, if properly performed, will enable the patient to lave thoroughly the mucous membrane of mouth, pharynx, as low as larynx, naso-pharynx and lower part of nose :

The fluid to be gargled is taken into the mouth so that latter is a little more than half filled. The head is then thrown well back, and, without closing the mouth, the movement of swallowing is performed. If mouth is not closed the fluid will not go lower than upper extremity of œsophagus. The swallowing movement being completed, the air is allowed to "gurgle" through the fluid. When the fluid is to be ejected, the patient places the tip of tongue against inner surface of incisor teeth of upper jaw, and throws the head quickly forward. If there exists no marked obstruction of nasal passages, the fluid will pass up, back of soft palate, washing out naso-pharynx, and make its exit through the nose.

In learning this method, children always need some substance held between the teeth to keep them with certainty apart. The accomplishment of this plan may also be defeated by tongue rising up until touching soft palate, when fluid will find its way down œsophagus.

Morell Mackenzie says: "The use of gargles is too well known to require any explanation, but the author has never found them of any service in diseases situated behind the anterior pillars of the fauces." Flint, Seiler, Buck, and Solis-Cohen make similar statements.

To prove the efficiency of gargling St. John Roosa proposed the following simple experiment: Paint the posterior wall of the pharynx with tincture of iodine and then gargle with starch water, and the chemical reaction of iodine will be found in ejected fluid.

French introduced particles of insoluble powder into the nose and found they penetrated to interior of larynx.

By means of gargling, in above stated method, with fluids whose combination would produce new colors, the author found evidences that the solutions had reached the extra-laryngeal surface of epiglottis, aryepiglottic ligaments, arytenoid cartilages and posterior commissure of vocal bands. At times color could be seen upon inner aspect of arytenoids, but never upon vocal or ventricular bands.

After ejecting fluid through nose, the naso-pharynx as high as Eustachian orifices was colored.

Conclusions:

1. That gargles when correctly used may be brought into contact with mucous membrane from tip of nose to larynx.
2. That the radical differences of opinion of authors in relation to efficacy of gargles has led to a general neglect of a most valuable adjuvant in treatment of affections of upper air-passages.

POSTICUS PARALYSIS IN INFANTS.

W. Robertson (Journal Laryngol. and Rhinol., October, 1891).

This condition has been observed by author in infants from three weeks to eighteen months of age. The most prominent symptoms are noisy and difficult inspiration. Expiration easy. Voice unchanged. Slight cyanosis, which increased on exertion.

Examination of larynx impossible on account of age of patient; diagnosis therefore based upon above mentioned symptoms. The pharynges and naso-pharynges of these cases all showed marked granular proliferations and profuse exudation of mucus.

The cause of this affection, the author believes to be the transmission of irritation from pharynx to medulla, where the accessory nucleus is excited and exhausted.

In cases of prolonged duration there is frequently a secondary contraction of adductors which greatly aggravates difficulty of inspiration.

Treatment in mild cases, simply cleansing and antiseptic spraying, syringing or douching with internal administration of ammonia bromide may remove cause of irritation.

In aggravated cases, removal of granulations from both pharynx and naso-pharynx by surgical means has given best results.

Where inspiratory obstruction is dangerous, intubation should be performed.

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CHILDREN AND THEIR DISEASES.

BY FRANCIS H. STUART, A.M., M.D.

ON THE ÆTIOLOGY OF DIPHTHERIA—LOEFFLER'S BACILLUS.

A. Baginsky (Archiv. f. Kinderheilkunde, Bund 13, p. 418f.) gives a careful study of the question of the ætiology of diphtheria, the constancy of Loeffler's bacillus, and of the relation of the severity of the disease to the bacillus.

Out of 93 cases, the diphtheria bacillus was positively proved to be present in 68 instances. Of these 68 cases 27 died, 38 recovered, and 3 were removed from the hospital, so that their histories were not completed. The mortality of the cases of genuine (bacillar) diphtheria was over 40 per cent. Of the 25 cases in which the bacillus was not found, only one died, and the fatal result followed exposure to genuine diphtheria. All the other cases only remained in the hospital a few days, when they were discharged in good health.

B. asserts that the presence of the diphtheria bacillus in the pseudo-membranous deposit upon the mucous membrane of the pharynx and tonsils constitutes the essential danger, and he offers the following reasons for his opinion:

1. That there are two forms of disease, indistinguishable by the naked eye, characterized by similar changes in the mucous membrane of the throat, and both are accompanied by fever, prostration, swelling of the submaxillary glands, and hence are clinically alike. Yet the two diseases are totally dissimilar: one is due to the diphtheria bacillus, and is very dangerous to life, being fatal

in almost 50 per cent. of cases; the other, caused by staphylococcus and streptococcus, is of slight moment, and is not dangerous to life.

2. The two diseases can only be distinguished by bacteriological cultures, but can thus be distinguished with absolute certainty. The method of doing this is an easy one, much more so than the isolation of the bacillus tuberculosis.

By bacteriological cultures, therefore, we can positively distinguish benign from malignant inflammatory deposits in the pharynx and adjoining structures. All cases of this character are to be isolated until the presence or absence of the diphtheria bacillus has been determined.

B. concludes his paper by referring to the non-identity of the diphtheria which occurs with scarlet fever with genuine diphtheria, *i.e.*, diphtheria due to Loeffler's bacillus, which question is the subject of the next selection.

THE NON-IDENTITY OF DIPHTHERIA AND SCARLET-FEVER DIPHTHERIA.

Heubner (Jahrbuch für Kinderheilkunde, XXXI., 1890, p. 56) maintains that there is a distinct difference between primary diphtheria and the diphtheria which occurs in connection with scarlet fever. In five cases of the latter disease he could not once find Loeffler's bacillus, which is generally regarded as the cause of primary diphtheria, while in cases of primary diphtheria he never failed to find the bacillus. Likewise, Kolisko and Paltauf did not find the Loeffler bacillus in cases of angina from diphtheritic scarlet-fever.

As farther proof that the two diseases are distinct he makes the following statements: In scarlet-fever diphtheria the tissue necrosis is not so marked as in primary diphtheria. Necrosis, and scarlet-fever diphtheria which begins with it, develops from the scarlet-fever angina in the latter part of the first week, and becomes clinically evident by the symptoms of septic infection, especially by swelling of the lymphatic glands and by the course of the temperature; the gradual fall of the temperature from the fourth day does not take place, or the temperature again rises when necrosis develops. Moreover, scarlet-fever diphtheria, unlike primary diphtheria, very seldom results in laryngeal stenosis and diphtheritic paralysis.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

THE SUPREME PASSIONS OF MAN, OR THE ORIGIN, CAUSES AND TENDENCIES OF THE PASSIONS OF THE FLESH. By Paul Paquin, M.D., Battle Creek, Mich.: The Little Blue Book Co., pp. 150.

The position taken by the author is based on a study of comparative tests of culture media for the nutrition of micro-organisms in the laboratory under his charge at the University of Missouri. He found he could "alter the shape, size, energies, color, properties, in fact, all the vital attributes, it seemed, merely by varying the kind, quality and quantity of food material." He thus obtained "a clear insight into the laws underlying the primary causes of certain sins of the flesh," and hence demonstrated to his own satisfaction "the influences of food and stimulants on man's character" and "the chemical laws underlying the passions," the various lustful appetites, venery, alcoholism, morphinism, nicotinism, and the various criminal interests, etc.

"Certain special substances partaken of as food or table beverages afford daily stimulation, which actually results in intensifying the natural animal tendencies and desires of the flesh," lowering the controlling power of the brain to such a degree . . . as to overcome the nerve cells whose duty it is to keep the community in uprightness.

"*Idleness* affords time for the mind to realize that it has passions, and to dwell upon them," and so we may add, "Satan finds some mischief still for idle hands to do." So we see the venerable Dr. Watts was something of a physiologist, as well as a hymnologist.

"Foods play an important part in the development of character." Sergeant Buzfuz recognized this in the case of Pickwick and Bardell, when he read the famous letter about "chops and tomato sauce," and directly traced the evil intentions of Pickwick toward the Widow Bardell by these means.

Numerous other illustrations might be given, tracing many unfortunate events to ill-prepared meals or to over-prepared meals or to no meal at all.

It is the happy medium, the adage "*Medio tutissimus ibis*," towards which the writer would direct our attention.

"It is not an illusion that nutrition has had much to do with the evolution of drunkenness. The liquor problem can only be solved through a man's stomach." We might add that the majority of the human race have and are attempting to solve the problem in this way, and, what is worse, are willing to keep on trying.

How simple, then, will be the means employed to prevent or cure all moral delinquencies, all evil habits, by withdrawing all stimulants, tobacco and stimulating food, from the dietary of our statesmen and legislators. The laws they enact will be bland and wholesome. Moreover, *criminals* will be reconstructed. They will not be sent to State Prison, but to a culinary laboratory where their tissues will be analyzed, and proper chemical cooks, well versed in cell nutrition, will build up defective cells and reproduce new ones of a healthy character, and so the usual "cell" in which the criminal is now placed will be done away with, when the criminal, no longer with criminal tendency, will be built up, renewed, rejuvenated, remodeled by an infusion of healthy "normal cells" in his organism.

Another great blessing to society will be the removal of the great affliction she has had to so patiently endure. Since society ate off tables and used knives and forks and plates, and especially glasses, namely, the after-dinner speaker, the post-prandial talker, the outcome of whose remarks indicated great volubility and great want of common sense, and so the after-dinner speaker will be relegated to the past, or appear in some Eden Musée and be gazed at through the medium of the "Chamber of Horrors," and why, because a demon of mush, milk, vegetables and water will not stimulate the cerebral cells, set them in wild and chaotic agitation, all of which is essential to the "after-dinner speech."

Then pass from individuals and customs to national life. Take, for example, the oatmeal of the Scotch nation, and look at their brain and brawn and muscle. Compare the effeminacy and luxury of the Roman before the fall of his empire. Another point, not only do we see the great advantages that will arise from a proper dietary in the national and individual life, but the utter abolition of the doctrine of "original sin," "Adam's transgression" and its consequent effect on his posterity. Aside from heredity, if we admit the evil effect of an improper diet, it was the apple that Eve ate that entailed a moral dyspepsia on all her descendants.

And so we might go on *ad infinitum*, piling deductions upon deductions, until we had built up a mountain of supposed truth, and then "Parturiunt montes nascetur ridiculus mus," for the mouse in this case would prove only a bacillus and not a normal cell of nerve, special sense or muscle, for our author has studied not the normal cell of tissue development, retarding or destroying it by broken or defective nutrition, but a simple micro-organism, and so we assert he has attempted to prove by speculative analogy that which should have been asserted only as the result of actual observation on the thing itself, namely, the "normal cell."

When the author leaves this view of the subject, and deals with the moral delinquencies and social evils of society he makes salient many well-known facts of interest, and is quite orthodox and emphatic in all these particulars. While the work does not add anything new to the field of science and attempts to prove results arguing from wrong premises, nevertheless the book has a healthy tone on the great moral evils of the day, and so may be of use in leading the public mind in proper channels of thought. L. D. MASON.

NOTES ON THE SURGICAL TREATMENT OF TUBERCULOUS CERVICAL GLANDS. By Edmund Owen, F.R.C.S., Surgeon to Children's Hospital, Great Ormond Street; Surgeon to St. Mary's Hospital, etc., London: The Practitioner, November, 1891.

The author first of all condemns sulphite of calcium for the treatment of this form of scrofuloderma and calls it "the veriest impostor of our pharmacopœia," in which we are inclined to agree with him in his article. He gives very little further in regard to medical or prophylactic treatment of these troubles, confining himself to the surgical side of the question, and giving hints in abundance for the successful carrying out of the methods, and a well-needed caution in regard to the care which is necessary in operation for removal of the deeper glands, in order to avoid injuring the internal jugular vein, around and on which, and seemingly connected with the sheath, so many of these bodies lie.

He recommends always the scraping away of the carious matter in every abscess of this kind which is opened, when, as so often happens, but one is affected, and calls anything short of this careless and imperfect surgery. Recommends having enough assistants in cases of operation, as, in case of accident, such for instance as has been hinted at regarding complication with internal jugular vein, at least three should always be present, the administration of the anæs thetic being quite enough for one to attend to in these cases. The only times he has feared for the life of the patient under chloroform have been in these identical operations in children.

A Review of Kaposi's Handbook. By T. Colcott Fox, London, England. Translated and Annotated by Besnier and Doyon. British Journal of Dermatology, p. 351. November, 1891.

This review by Dr. Fox is, as might be expected, most fair and excellent; no one could be more competent, or could approach the somewhat delicate task of criticising the dermatologic illuminati of two such important and scientific countries better, or in a more truly scientific spirit.

It is hardly in our province to here review this review, but it may and should be read by any interested in dermatology. He points out, in a very quiet but precise way, where authors other than from those two countries have been neglected or totally ignored, even when their names have been affixed by general consent to certain diseases of the skin. Points out, too, the tendency to dogmatism of the Viennese School, and the tendency to prolixity and the extreme, not to say impossible, subdivision of the French writers; the omissions *in toto*, the facts coolly accepted without credit, due to observers of other nations, etc., etc. Of course, Dr. Fox is perhaps more sensitive on these points when they regard Great Britain, but nothing can exceed his gentlemanly way of criticism in the matter. He praises the book, but it would seem that for the *general* profession the review should be read first, the book afterward.

A Method of Accelerating Desquamation and Therefore of Shortening the Infective Period in Scarlet Fever. By W. Allan Jamieson, M.D., F.R.C.P., etc., Extra Physician for Diseases of Skin, Edinburgh Royal Infirmary, etc., etc. The Lancet, p. 604. September 12, 1891.

The author alludes primarily to the fact of having written years ago on the same subject, which has interested him deeply, as indeed it must all medical men. He refers to the fact that for a more or less great length of time (which we consider an excessive one), which he puts at two months, of danger of infection to others, and of a pariah-like social condition in those affected. He speaks of the means he advocated in a former paper, viz.: by use of unguents containing three per cent. of carbolic acid, followed by baths, and the repetition of the unguent every twenty-four hours. He then considers the action of resorcin, and the difficulties he found in combining it with soaps without the presence of an acid, then further goes on to compliment Eichoff on solution of the difficulty by adding salicylic acid; he also refers to the makers of these soaps in complimentary terms, and then gives his experience in the use of the soap compounded with resorcin and salicylic acid. He found a great difference in the period of the commencement of desquamation in various patients, it commencing on the fourth day in some, in a few not until as late as the sixteenth day, the average being the ninth.

He found the average period of desquamation in those left entirely without washing to be 55.5 days, but when washing with the resorcin-salicylic soap, as soon as desquamation commenced, or even slightly before the desquamation was entirely completed, in 40.26 days. In two cases washing with the soap was practiced only on one side of the body, the commencement so to do being made in the one case three, in the other, four days prior to any appearance of scaling; in these cases the desquamation appeared first on the respective side treated, and he leads us to the inference that the period of desquamation was much shortened as well.

A CASE OF "ANTHRAX" SUCCESSFULLY TREATED BY EXCISION AND MERCURIAL IRRIGATION. By J. A. Hutton, M.B., B.S., M.R.C.S., L.R.C.P., etc. Lancet, September 19, 1891, p. 658.

The author gives in this a report of three cases of anthrax, and his successful treatment of one of them. The article, though containing nothing particularly new, is of interest, as showing a typical mode of infection in these cases, the difference of time in the different individuals as to excessive manifestations of malignancy of the pustule, and as showing probable benefit of early and radical treatment of the primary lesion, and of after measures.

INTERNATIONAL MEDICAL ANNUAL FOR 1892.

E. B. Treat, publisher, New York, has in press for early publication the 1892 "International Medical Annual," being the tenth yearly issue of this deservedly popular work.

Its corps of thirty-five editors are specialists in their respective departments, and have been carefully selected from the brightest and best American, English and French authors.

It is the embodiment of what is worth preserving of the current medical journals of the world for the year, and will contain over 6,000 references to diseases and their remedies.

The service rendered the profession by this Annual cannot be overestimated, and it is an absolute necessity to every physician who would keep abreast with the continuous progress of practical medical knowledge.

This index of new remedies and dictionary of new treatment, epitomized in one ready reference volume at the low price of $2.75, makes it a desirable investment for the busy practitioner, student and chemist.

THE DOCTOR'S WEEKLY.

This is the name of the youngest child of the fecund goddess of medicine who presides over the health of New York City, devotes a page to medical directories, and catalogues no less than thirty-three medical societies holding regular meetings; sixty-one hospitals, and forty-nine dispensaries and infirmaries, together with one hundred and two asylums and homes—all in the City and County of New York.

Essentials of Physiology. By H. A. Hare, B.Sc., M.D. Third Edition, pp. 185. Philadelphia: W. B. Saunders. Price, $1.00.

This edition has been very much increased in size by the addition of handsome plate illustrations taken from the celebrated "Icones Nervorum Capitis," of Arnold. These plates with their descriptions will certainly assist the student to gain a mastery of the anatomy of that most difficult part of human anatomy, the cranial nerves.

Massage and the Original Swedish Movements. By Kune W. Ostrom. Second Edition, enlarged, with eighty-seven illustrations. Philadelphia: P. Blakiston, Sons & Co., 1891.

The author, as instructor in massage and Swedish movements in the Philadelphia Polyclinic and College for Graduates in Medicine, would seem to be qualified to explain to physicians and nurses how these movements are to be applied. Those who are desirous of becoming familiar with these methods will find in this little book of 143 pages a description of the various manipulations. A bibliography appended will be found useful to those who wish to investigate the subject more deeply.

MISCELLANEOUS.

TREATMENT OF LA GRIPPE.

The following is the treatment of La Grippe employed by the distinguished F. Peyre Porcher, M.D., of South Carolina, communicated by him during the last epidemic to the *New York Medical Record*. He says:

"I have seldom or ever had occasion to visit any one with this disease more than from three to five days, using the following method. As in yellow fever, a mercurial purge is required at the inception of the attacks—the following formula being used:

℞.	Calomel	gr. iij.
	Rhubarb	gr. iv.
	Calc. magnesia	gr. xx.
	Soda	gr. iij.
	Ipecac	gr. 1/4.

And if fever exists, a fever mixture:

℞.	Spirits of mindererus	ʒ j.
	Sweet spirits of nitre	ʒ iij.
	Tincture of aconite	gtt. xxx.
	Paregoric	ʒ ij.
	Water to	℥ iv.

A dessert-spoonful in water every two hours.

"If, as is often the case, the lungs threaten to become implicated, wine of antimony and syrup of senega, āā ʒ iij. are added; with the use of local applications to the chest, or to the seat of pain, of mustard or turpentine.

"Three grains of quinine are given thrice a day, and port wine freely used after the first day. I prefer California port because it is sound and inexpensive. Milk punch may also be used, as it prevents the tendency to weakness and prostration. If there is much pain, headache or insomnia, phenacetine, five to seven grains, can be prescribed for their relief, preferably at night.

"In a youth, whom we saw with his father, a physician, and who was suffering from a relapse, the high and persistent fever, and repeated and violent delirium—occurring day and night—were completely relieved by five grains of phenacetine given twice at an interval of six hours.

"As soon as the purgative produces a medicinal effect, the force of the disease seems to be broken. Antimony is to be preferred to ipecacuanha to prevent the tendency to pneumonia or to congestion of the lungs."

PIPERAZINE.

Dr. Heubach, of Berlin, has recently been experimenting with piperazine, in the Johanneum, with reference to its powers as a solvent of uric acid. He employed the drug in the following cases, with the results described:

I.—E. J., 37 years, cigar-maker. Said to have had albuminuria five years before, which gradually disappeared. Treated at beginning of year with twenty-one specific injections, etc., for tuberculosis in larynx. In February had albuminuria. In May pains in kidneys, bladder, and in the urethra. Four weeks before entering clinic a severe attack of nephritic colic; pain remained and continued in the region of the left kidney, and in the urethra; constipation; difficulty in urinating, and constant urgent desire to urinate, etc.

When received his complaints still existed: much sedimentum lateritium in urine; some albumen. After eight days' treatment with other remedies patient was put on one-half per cent. piperazine solution, a tablespoonful every two hours.

On the third day after beginning this medication, severe pains presented in left kidney region, aggravated during evacuation. Shortly after, accompanied with great pain, a uric acid concrement was discharged with blood-containing urine; this resembled in size and form a medium-sized incisor tooth, and weighed 0.395 gm. The surface was plainly eroded. Since then patient has been free from all malady.

II.—Patient, 50 years old, is wife of a colleague, and under treatment by Prof. Zuelzer. For years constant elimination of gravel, usually consisting of uric acid. Frequent colics. Urine usually contained blood. Since early in September patient has taken one-half per cent. piperazine solution, a tablespoonful every two hours. Ten days after commencing this medication profuse elimination of small, round uric acid calculi, lasting several days. Since then the colic-like attacks have ceased, likewise the hæmaturia.

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THE NEW YORK STATE MEDICAL EXAMINATION.

At the first examination under the new law, which was held on the 10th, 11th, 12th and 13th inst., the questions were as follows:

Chemistry.—1. What element composes over half the matter of the earth? 2. What is oxidation? 3. What is ozone? 4. Mention a test for sugar other than Trommer's. 5. What is Fehling's solution? 6. Describe the mode of testing for albumen in urine. 7. Name the chemical constituents of biliary calculi. 8. Upon what do the bleaching and disinfecting properties of chlorine depend? 9. Define an acid, a base, and a salt. 10. Write the formula for sulphuric acid. 11. What is Paris green? 12. What is the chemical name of Rochelle salts? 13. Give the formula for mercuric chloride (corrosive sublimate) and [the formula for] mercurous chloride (calomel). 14. What is the chemical designation of the ordinary alcohol of commerce? 15. From what substances is ether obtained?

Anatomy.—1. Give a brief anatomical description of the humerus. 2. Describe the osseous structure of the thorax and the number and general characteristics of the ribs. 3. Describe a lumbar vertebra. 4. Describe the difference between an artery and a vein. 5. Describe the three coverings of the brain and name the principal sinuses. 6. Locate and describe the urinary bladder. 7. Describe and locate the ileo-cæcal valve. 8. Give the number of the temporary or milk teeth and also the number of permanent teeth. 9. What are the origin and course of the pulmonary artery? 10. Give the names of the principal muscles of the back. 11. Give the order from within outward of artery, vein and nerve in Scarpa's space. 12. Describe the thoracic duct. 13. Give the gross anatomy of the liver. 14. Locate and describe the kidneys and suprarenal bodies. 15. Locate and describe the rectum.

Physiology and Hygiene.—1. How does the digested food enter the circulation of the blood? 2. What conditions within normal limits will modify the quantity of urea in the urine? 3. Give the mechanism of nerve-reflex and an example of its action. 4. Describe the functions of the liver. 5. How does respiration affect the blood? 6. Name the several digestive ferments and give the action of each. 7. Name the physical properties of pure water. 8. What are the objects of cooking food? 9. Into what general classes are foods divided? Give examples of each class. 10. How does the air of crowded rooms become foul? 11. How much space is required for a single individual in a sleeping apartment to insure health? 12. What deformities are liable to result from improperly constructed desks and seats in school-rooms? 13. Name the principal means for preventing the spread of contagious diseases. 14. Name three tests for detecting impurities in water. 15. What is the best sanitary plan for the disposal of sewage?

Obstetrics.—1. Describe the development of the fertilized ovum in its early stages. 2. What is to be learned by abdominal auscultation in pregnancy? 3. What changes occur in the uterus during pregnancy? 4. How is prolapse of the funis recognized and treated? 5. What is meant by inertia of the uterus during labor? How does it complicate labor and how should it be treated? 6. What signs would indicate death of the fœtus prior to labor and what should be done in such a condition? 7. What are the certain signs of pregnancy? 8. How is the perinæum endangered in labor? 9. Give the diagnosis and management of a face presentation. 10. Describe the methods of removing the placenta, and tell when they are appropriate. 11. What are the causes of hæmorrhage after labor, and what is the treatment? 12. What care does the mother require after labor? 13. Give the causes, symptoms and treatment of asphyxia of the new-born. 14. Give the causes, symptoms and treatment of mammary abscess in the puerperal state. 15. Describe the common varieties of the obstetric forceps and their application.

Surgery.—1. Name the different methods by which wounds heal, and describe each. 2. What is a tumor? 3. Give the treatment of fracture of the clavicle. 4. What are the symptoms of strangulated inguinal hernia? 5. What tissues are divided in the operation for femoral hernia? 6. What are the causes of atony of the bladder? 7. Give the general treatment for the arrest of hæmorrhage. 8. How and in what part of the inferior maxillary bone is fracture most liable to occur and what is the treatment? 9. How is fracture produced? 10. What is a dislocation? 11. What is the treatment of simple penetrating wounds of the abdomen? 12. What is the treatment of asphyxia? 13. Where are the swelling and fluctuation most prominent in synovitis of the ankle joint? 14. What is the pathology of "white swelling"? 15. Give a description and state the characteristic symptoms of scirrhus of the mamma.

PATHOLOGY AND DIAGNOSIS.—1. Describe the eruption of typhoid fever. 2. What is endemic disease? 3. Give the symptoms of epidemic influenza. 4. What is hæmoptysis? 5. What are the normal sounds heard in inspiration and expiration? 6. Give the physical signs of pleuritic effusion. 7. What is hypertrophy? 8. What are crepitant râles? 9. How would you diagnosticate a case of diphtheria? 10. What is the normal relation of the pulse to respiration? 11. State briefly the rational and physical signs of acute bronchitis. 12. Give the clinical history of an acute attack of croupous pneumonia. 13. Describe the natural heart sounds. 14. On what day does the rash usually appear in scarlatina? 15. Give the pathology of carcinoma.

THERAPEUTICS, PRACTICE, AND MATERIA MEDICA.—*A. Questions prepared by the Board of Examiners representing the Medical Society of the State of New York:* 1. What are the therapeutic uses of ergot of rye? 2. What are the therapeutic uses of digitalis? 3. Explain the therapeutic uses of opium in dysentery. 4. What are the indications for the therapeutic uses of nux vomica or strychnine? 5. What are the therapeutic uses of potassium iodide? 6. State your treatment, including diet, of typhoid fever. 7. Describe the treatment of diabetes mellitus. 8. Give the symptoms and treatment of tetanus. 9. What is the appropriate treatment of epilepsy during a convulsive attack? 10. Give the treatment of acute croupous pneumonia. 11. Describe ergot of rye, its physiological action, and give the dose of the fluid extract. 12. Name three official preparations of digitalis, and give the dose of each. 13. Name an important alkaloid of erythroxylon and describe the purposes of its application and its effect. 14. Write a prescription containing morphine for hypodermic purposes, and state the amount to be used for an adult at each injection for the purpose of allaying local pain. 15. Give the difference between a laxative, a saline purgative, a drastic purgative, a hydragogue purgative and a cholagogue purgative, and name examples of each.

B. Questions prepared by the Board of Medical Examiners representing the Homœopathic Medical Society of the State of New York:

1. Name five remedies frequently indicated in eczematous eruptions, and state for what form of the disease each is applicable. 2.

Name two prominent remedies, with indications for their use in cystitis. 3. Give the indications of aconite, gelsemium and baptisia in febrile conditions. 4. Name four of the chief remedies in typhoid fever, giving indications for their use. 5. Name four principal remedies for hæmorrhage, and give at least one characteristic indication for each. 6. What is the prognosis of diabetes mellitus and what its treatment? 7. Under what conditions would you give a grave prognosis in scarlatina? 8. State your treatment, including diet, of a severe case of diphtheria, also name four remedies and give their chief symptoms. 9. What is the proper treatment of pleurisy with exudation? 10. What are the causes of death in Bright's disease? 11. How does a homœopathic mother tincture differ from a fluid extract? Explain in a general way the preparation of homœopathic tinctures. 12. What are the chief preparations of opium? What doses produce the physiological effects of the drug and what doses are poisonous? 13. When giving digitalis in large doses, what should be its limitations and what are the dangers of its excessive use? 14. Differentiate between the pathogenetic effects of bryonia and cimicifuga. 15. Compare bryonia and phosphorus in chest disease.

C. Questions prepared by the Board of Medical Examiners representing the Eclectic Medical Society of the State of New York:

1. What are the therapeutical uses of nux vomica and strychnine? 2. Under what circumstances would you prescribe aconite, belladonna, bryonia and gelsemium? 3. What remedies dissolve the membrane of diphtheria? 4. Name three of the most reliable remedies for pulmonary hæmorrhage. 5. State the difference between a stimulant and a tonic. 6. What is the most frequent cause of valvular lesion of the heart? 7. Give the differential diagnosis between Bright's disease of the kidneys and diabetes. 8. What is the test for deciding between sunstroke and apoplexy? 9. What symptom is conclusive evidence of pneumonia? 10. What are the symptoms and treatment of poisoning by strychnine? 11. Name the properties and dose of gelsemium, aconite and belladonna. 12. Name the properties and dose of veratrum viride, digitalis and nux vomica. 13. What are the preparations of opium and its alkaloids? 14. Name the most prominent heart stimulants. 15. What are the medicinal uses of ergot and of lobelia inflata?

In the examination in therapeutics, practice and materia medica, the first five questions were under the head of therapeutics, the second five under that of practice, and the third five under that of materia medica. Each candidate was required to answer ten of the fifteen questions, and was not allowed to "cancel" more than two in each group.

PAN-AMERICAN MEDICAL CONGRESS.

THE BROOKLYN MEDICAL JOURNAL has been designated by Dr. Charles A. L. Reed, Secretary-General, as one of the official organs of the Congress which will meet in Washington, September 5–8, 1893.

JOURNAL OF COMPARATIVE NEUROLOGY.

All correspondence with the undersigned, or relating to the *Journal of Comparative Neurology*, as well as all exchanges with the latter, should be addressed, until October, 1892, to Granville, Ohio, U. S. A. After October the Journal will be published from the University of Chicago, Illinois, U. S. A.

C. L. HERRICK, Editor.

BROOKLYN VITAL STATISTICS FOR QUARTER ENDING DECEMBER 31, 1891.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population, estimated, Dec. 31, 1891, 880,780

Rate of mortality per 1,000: Oct., 21.91; Nov., 20.68; Dec., 25.05

Total deaths: Oct., 1,622, Nov., 1,482; Dec., 1,855

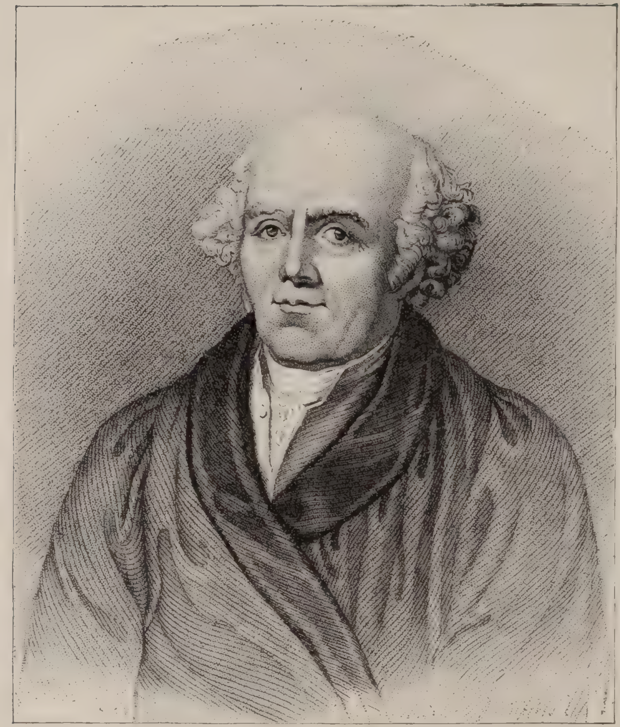
Total births reported: Oct., 1,495; Nov., 1,328; Dec., 1,471

The mortality by certain of the more important diseases was as follows:

	Oct.	Nov.	Dec.		Oct.	Nov.	Dec.
Measles,	3	2	9	Whooping Cough,	4	3	4
Croup,	49	47	45	Phthisis,	189	167	174
Diphtheria,	56	65	93	Bronchitis,	73	81	149
Scarlet Fever,	16	37	46	Pneumonia,	144	210	329
Typhoid Fever,	27	24	16	Bright's Diseases,	35	34	44

Certain foreign and American cities show the following death-rates:

	Oct.	Nov.	Dec.		Oct.	Nov.	Dec.
Brooklyn,	21.91	20.68	25.05	Vienna,	20.66	19.18	23.85
New York,	22.28	22.18	26.72	Paris,	19.39	19.87	23.48
Philadelphia,	19.48	21.23	24.78	London,	15.72	17.15	20.52
Berlin,	21.76	18.92	24.82	Glasgow,	18.34	23.40	31.70
				Dublin,	22.98	25.80	33.02



SAMUEL HAHNEMANN

Was born in April, 1755, at Meissen in Saxony. He took the degree of M.D. at Erlangen in 1779. He practiced his profession in various parts of Germany and Switzerland, earning more from his literary work than from his profession.

In 1890, while residing in Leipzig, he translated Cullen's Materia Medica from the English into German, and while engaged in this translation he was struck with the insufficiency of the explanation of the *modus operandi* of cinchona bark in curing ague, and it occurred to him to take a large dose, in order to see what the effect would be on a healthy body. He took four drams of it in successive doses, and in the course of a few days experienced all the symptoms of ague (this happened in Leipzig, where at that time the disease was very common), and he concluded that the reason why cinchona cures ague is, because it has the power to produce symptoms in a healthy person similar to those of ague. This experiment was the beginning of a large series of similar experiments extending over a number of years, until 1808, when he published his great work, the "Introduction to the Organon of Medicine," which has been translated into all European languages, and also into the Arabic, and presents a curious illustration of erudition and ingenuity. He collected, from an immense variety of sources, testimony in regard to the dual action of over thirty medicinal substances; one set of authorities proving the power of certain drugs to produce certain symptoms similar to those reported by other authors to have cured by the very same means.

This book fully explained his doctrine "*similia similibus curantur*," or diseases are cured by remedies which have the power of exciting a similar train of symptoms in a healthy body to the disease to be treated. In other words an artificial drug-disease must be substituted, which must be similar to but stronger than the natural disease. This was originally all there was of homœopathy. It was several years after this that he brought out his system of infinitesimal doses.

Hahnemann found that medicines prescribed in sensible quantities according to the law of similars, always produced an agravation of the symptoms, and consequently brought out his principle of high dilutions and triturations as the second important law of homœopathy.

It is claimed by his followers that during the process of dilution, trituration and agitation, medicines so treated have imparted to them a dynamic power or force which is not possessed by them as material agents, and this potentiality is increased by the number of shakings, as well as the dilutions. Hahnemann claimed that these medicines act by their dynamic power only and not as physical or chemical agencies, and that diseases being of a spirit-like nature cannot be reached in any other way than by a dynamic force.

This attenuated pathology, which he explains in the Organon, is the most curious of his theories.

Disease consists of a disordered condition of the vital, spirit-like, or dynamic force of the body, which manifests itself by certain disordered sensations or symptoms, the totality of which constitutes the disease or thing to be treated. He discouraged investigations with a view of ascertaining the cause of disease, and even ridiculed other physicians for efforts made in that direction, saying: "They fancied that they could find the cause of disease, but they did not find it, because it is unrecognizable and not to be found, since by far the greater number of diseases are of a dynamic origin and nature; their cause, therefore, remaining unrecognizable." He died in Paris on the second of July, 1843.

J. H. H.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

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ORIGINAL ARTICLES.

THE ULTIMATE RESULTS OF OPERATIONS FOR REMOVAL OF THE UTERUS OR ITS APPENDAGES.

BY LEWIS S. PILCHER, M.D.,

Surgeon to the Methodist Episcopal Hospital.

Read before the Medical Society of the County of Kings, Nov. 17, 1891.

Of the achievements of surgery during the past twenty years, none have been more far-reaching in their results than those which have had to do with the uterus and its appendages.

Horsley and Macewen possessed of the facts of cerebral localization and of clean technique have torn away the veil that has hitherto shielded the cerebro-spinal axis from surgical endeavors, and the possibilities of cerebral and spinal surgery have been demonstrated both by their results and those of many others who have emulated their example. But this field of endeavor must ever be a restricted one, and the opportunities for its exercise be of rare occurrence. Despite the diagnostic acumen and operative skill of Horsley, a Gladstone dies from the application of the trephine in his hands, while an equally disastrous result attends the efforts to relieve the cerebral abscess of a Conkling. The stomach has yielded itself to the skilful knife of a Billroth, but at the end of ten years, out of twenty-seven patients in whom pyloric resection had been done by this master in surgery and his assistants, but one patient lived to exemplify for more than six months the benefits of the operation, while more than one half of those who had accepted the knife had succumbed at once to the operation itself. Malignant disease of the larynx has been extirpated with success, and by the surgeons of Germany especially has the experience in this field of endeavor been attained; nevertheless in the person of the Emperor of Germany laryngeal carcinoma but recently marched steadily to its fatal end.

Each organ and region of the body that has yielded successful results when subjected to surgical attack has likewise its list of failures and limitations to be registered, which is nothing more than saying that surgery is not carpentry nor blacksmithing, that human bodies are not chemical retorts, that all the processes of life cannot be weighed or accurately calculated in any given case.

Pelvic surgery likewise is subject to similar limitations to those which attend surgical work in other parts of the body. This branch of surgery, however, presses itself upon our attention more forcibly and continually than some others, because of the frequency of the conditions which call for its intervention.

It is so recent in its growth, and its advances and triumphs have been so marked, that until quite recently the professional mind has been preoccupied with the new possibilities which each decade has been converting into actualities. The professional life of many of our number who count themselves still young runs back beyond the year 1858, when Spencer Wells began his career as an ovariotomist. Not longer ago than early in the seventies is it that the importance of chronic inflammatory disease of the uterine appendages was recognized by Tait, and he entered upon his forcible and fruitful work of operating for their relief. It was in 1872 that, before this medical society of the County of Kings, Marion Sims read a brilliant paper, in which he stated his convictions of the rôle of septicæmia in causing deaths after ovariotomy, and made suggestions as to the use of drainage to prevent it. In the same year our colleague, John Byrne, communicated to this Society his experiments in the use of the electric cautery in destroying malignant disease of the uterus. At the close of this same fruitful decade, in 1879, Czerny, of Heidelberg, began to perform vaginal hysterectomy for uterine cancer.

The decade of 1880–'90 may properly be said to have been a period during which in the domain of pelvic surgery a careful testing and sifting of diagnostic significations, operative indications and technical methods, has been going on. It is an omen of promise for the future that to-day, on every hand, surgeons are bringing together their ripened experiences, so that out of their aggregation more satisfactory conclusions may be reached as to the real benefits which the surgery of these days has to promise to those suffering from pelvic disorders.

In March, 1890, Coe, in a paper before the New York Academy of Medicine, called attention to the fact that recovery after operations for the removal of diseased uterine appendages was by no means always synonymous with restoration to health, and that in some instances sequelæ were left which were more intolerable than the original conditions, to relieve which the operations were performed. In April of the present year the French Congress of Surgery devoted a session to the consideration of the Remote Results of the Removal of the Uterine Appendages, being favored with memoirs on this subject by Lawson Tait, and by Richelot.

At the recent Congress of American Physicians, in September of the present year, the same theme was discussed, having been introduced by a paper on the subject by Lusk. Numerous additional communications on various aspects of this subject have recently been made to other societies or have appeared in various medical journals. The theme is thus seen to be one of present interest, as well as one of great importance, and your Surgical Committee have judged that it could render no greater service to the Society at the present time than by securing its presentation and discussion, more particularly if possible in such a way as to make especially prominent those features which most concern the general practitioner rather than the gynæcological specialist. For this reason the subject has been made to include the ultimate results of extirpations, not only of the uterine appendages, but of the uterus also. The wide observation and mature and extensive experience of the other member of the committee who is to follow me, Dr. Byrne, and of our guest from Baltimore, Dr. Kelly, cannot fail to make their communications of great value in adding to our knowledge of the conditions in question. My own duty is rather to simply outline in a somewhat general way the matters to which the attention of the Society is to be invited, and then to give place to the more specific communications of my colleagues.

Let me first briefly outline the accepted indications which in the view of most if not all surgeons now justify the removal of the uterus or its appendages.

Extirpation of the Uterus.—This procedure is indicated: *a.*, in cases of inveterate and intractable prolapse of the uterus; *b.*, in cases of intractable inversion of the uterus; *c.*, in certain cases of myoma, in which, despite the energetic and intelligent use of other measures, the tumor continues to grow and causes serious disability or suffering from pressure effects, or provokes persistent serious hæmorrhages or undergoes cystic degeneration, or develops serious septic conditions; *d.*, in cases of malignant disease of the uterus, as long as the disease remains limited to the uterus itself. It should be noted that many eminent surgeons limit this indication for hysterectomy to those cases of malignant disease in which the body is invaded, while for those in which the disease is limited to the cervix an amputation of the cervix, supra-vaginal, by the knife, supplemented by the cautery, or by the cautery knife alone, is substituted.

e. Possibly in cases of suppurating pelvic peritonitis, in which the uterus and appendages are blended together in a mass of adhesions that cannot safely be separated when reached through an abdominal incision and in which the removal of the uterus by morcellement through the vagina (the method of Péan and Segond) gives abundant access to multiple foci of suppuration and ensures subsequent adequate drainage.

Removal of the Appendages.—Ovarian neoplasms constituted the first established indication for removal of a diseased appendage. To this are now to be added:

b. Uterine myomata attended with serious menorrhagia.

c. Chronic and intractable inflammation of the ovary and Fallopian tube, attended with pain and disability.

d. Suppurative inflammation of the Fallopian tube, with retention of septic products within the distended tube.

e. Marked nervous disturbances provoked by each recurrence of menstruation.

I beg to submit this outline as the framework around which may be gathered the discussion of the evening. It should be borne in mind that matters pertaining to pathology, diagnosis, and operative technique—except as different methods of operating may bear on ultimate results—are foreign to the theme of the present hour. All facts, however, that may add to our fund of information as to the ultimate effects of operation for the relief of any of the indications named will be germane to the discussion, and of present value.

The question of primary mortality is only indirectly concerned at present. The perfected technique of to-day, added to accumulated experience in the management of the ever-varying complications which distinguish individual cases, has reduced to very small proportions the direct danger to life of these operations when done by gentlemen who are adepts in the one and furnished with the other. Thus Tait claims to have reduced his death-rate after operations for removal of the appendages to less than three per cent. Wylie claims a similar low mortality in his last three hundred cases. Lusk lost but two out of sixty-five patients operated upon similarly. Péan reported sixty operations of hysterectomy for the relief of pelvic suppurations, without a death, and Segond has reported forty-two similar cases with but four deaths. In vaginal hysterectomy for cancer, the recent experience of a number of Continental operators (Leopold, Kaltenbach, Ott, Péan) showed a mortality of less than five per cent.—a favorable showing, which is equalled by the results of Cushing, Wylie, and Krug on this side of the Atlantic.

The proportion of absolute recoveries, meaning thereby the relief of the pains and disabilities of disease and restoration to a life of comfort and usefulness is by no means so great.

Coe, in his paper already referred to, dwelt with emphasis on subsequent intra-pelvic indurations and adhesions, resulting from localized peritonitis, and causing persistent pelvic pain, uterine congestions (with or without pseudo-menstruation), vesical and intestinal disturbances due to intestinal adhesions and cicatricial tractions. Subsequent fatal intestinal obstruction is not an unknown result of such adhesions.

Tait states that ablation of the appendages in cases of chronic inflammatory affections thereof does not often bring about immediate relief to pain, but adds the assurance that this pain rarely persists for more than a twelvemonth, though for a time it may have caused much disappointment to the patient and a lot of trouble to the surgeon. Valuable observations on this point have been made by Lee, who has brought together full and accurate reports of the conditions during a period not less than five years after operation, of thirty-six cases of removal of the appendages. In five of these cases relief from pain continued at the end of that time still quite imperfect; in four of those, though the relief is considerable, rotable pain still persists; in two instances it was not until after the lapse of two years that the pain was relieved; in four cases relief was obtained after one year; in six, within periods varying from two to six months; thus leaving only four out of the whole number in which immediate complete relief was experienced.

This persistence of pain for some time after operation accords with my own limited experience. Within the past two years I have been compelled to remove the appendages for the relief of chronic inflammatory conditions in four instances. In two of these the adhesions were dense and extensive, making the operations complicated and severe; in two the absence of such complications rendered the operations facile; all recovered excellently from the operations, but all continue to assert that their old pain is not relieved. In two of these cases a life of constant pain had been endured for nine and twenty-two years respectively before operation. The pain-habit—for there is such a thing—demands time for its abolishment in such cases; the removal of the local disease, essential and important as it is, is but the first step toward ultimate recovery. I think that I have reason to believe from the reported experience of others that ultimate relief will yet be acknowledged by all these patients. I am encouraged to this belief by the result in a case not included in the number above referred to, in which I removed a large cysto-adenoma of the broad ligament; the enucleation of such a growth from between the layer of the broad ligament leaves behind local anatomical conditions somewhat similar to that remaining after the enucleation of adherent and distended tubes and ovaries. In the case in question not only was the ovary and tube on the side of the tumor removed with the tumor, but inspection showing that the opposite ovary was the seat of extensive cystic degeneration, it was also removed. The patient made an uncomplicated and rapid recovery from the operation, but for nearly two years thereafter she continued to complain of severe pelvic pain, apparently in the intra-pelvic cicatrix left by the ablation of the tumor. But quite recently she presented herself for examination with the agreeable intelligence that at last her pains had disappeared.

Allusion, at least, ought to be made to certain occasional sequelæ which in some cases are unavoidable, and in others are referable to defective technique, and which are likely to diminish in frequency with increase of skill in operators. I refer to herniæ forming in the cicatrix of the wound in the abdominal wall; to fistulæ from ligatures that have become infected and remain as sources of suppurative inflammation within the pelvis for indefinite periods; to fæcal and urinary fistulæ which in rare cases result from persistence in attempts to separate dense adhesions to intestine or bladder. Tait says that he no longer ever permits himself to be checked from breaking adhesions by the fear of causing a rent either of the bladder or of the intestine, although in many cases he has seen to form and persist for several months urinary and fæcal fistulæ, because he has always been ultimately successful in closing such fistulæ. Whether an equal success shall attend the efforts of other operators is a matter on which testimony is yet to be accumulated. I cannot think, however, that it can ever be generally felt that rents into intestine or bladder complicating the enucleation of inflammatory masses within the pelvis are not complications both formidable and to be dreaded, and that, even if immediate danger to life is averted, the remote results of consequent adhesions, undue traction, and the dangers of secondary operations, must entail much suffering and disability and peril.

Mental disturbances are undoubtedly among the possible ultimate sequelæ of the removal of the uterine appendages. How many, if any, instances of insanity or morbid mental depression *post operationem* are fairly referable to the operation itself is difficult to determine. Certainly in not a few instances some warping of the mind has already resulted from the long-continued suffering which patients have undergone before being submitted to operation. In some temperaments an exaggerated idea of the damage which they have received as individuals by the loss of their ovaries may conduce to intensification of such mental disturbances. In most instances the lapse of time, the subsidence of pain, the improvement in general health, and the influence of reassuring advice suffices to dispel this; possibly in very exceptional cases the unstable mind may become pushed over into confirmed insanity. Certain mental eccentricities and unevennesses of temper are accepted as the frequent natural attendants of the establishment of the menopause. From these nervous manifestations the artificial menopause is not free. But these disturbances are transient in their nature. Aside from these, I have been unable to find any observations which convince me that by the mere loss of her uterine appendages a woman was made especially susceptible to the development of mental alienation, or to make this possible remote consequence a matter that should have any weight in determining in a given case whether the appendages should or should not be removed.

Sterility is, of course, a result of the loss of the uterus, or of the ovaries. Perhaps a way to put it more consistent with the facts of the case is, that in the presence of the conditions in which removal of the uterus or its appendages is required as a therapeutic measure, fecundity is not restored by it. This latter way of putting it is more true to the facts in all cases except those of general neurosis, which are sometimes benefited by castration. In such cases, however, the loss of their power to procreate is not without its compensations from the view-point of humanity.

The possibilities of marital congress, destroyed by disease except under the penalty of great pain, are restored as a rule by the operations in question.

The effects of the loss of the appendages upon the sexual appetite has been the subject of much inquiry. The weight of testimony seems to me to be that whatever the effects may be they are indirect, through the general changes which attend the menopause that has been induced. The lapse of some years must be required to secure the full adjustment of the economy to the changed conditions of life, whether the menopause comes in the order of Nature or is induced by the surgeon. Lee's report, previously referred to, is the only systematic attempt to give the required information after the lapse of a number of years, and he has been able to obtain the needed data in only eleven cases. Of these, in eight, he reports the sexual appetite to have been unaffected; in three, to have been diminished.

Here again in much that has been said the subject has been approached from the wrong direction. In the cases in which a properly conservative surgeon would advise an operation the sexual appetite no longer exists; in the inflammatory cases the pain which the marital approach causes is so great that the mere suggestion of the act brings a shudder. It would be more true to the facts to say that in the great majority of cases the ultimate effect of these operations is to restore the sexual sense to its normal condition, but that in a certain minor proportion of cases this appetite does not return. In any event, the point seems to me to be one only of curiosity, and to have no practical bearing in influencing surgical work.

The recurrence of malignant disease after removal of the uterus or its appendages is subject to the same laws which govern such disease when appearing in any other part of the body. While the female breast is the most frequent seat of malignant disease of any organ or portion of the body, the uterus is nearly as susceptible, the proportions of carcinoma, according to the tables of Williams (Annals of Surgery, Oct., 1891), being as six to seven. The ovary, though rarely the seat of primary attack, is not wholly exempt, the proportion of primary ovarian to uterine carcinoma being as one to sixty. In sarcoma, however, the proportions are reversed. Comparatively rare in either the uterus or ovary, the proportions are as twelve of the ovary to one of the uterus. The breast, however, still exhibits the greatest susceptibility in the proportion of fifty of mammary to one of uterine sarcoma.

The best statistics as to the cure of malignant disease in other parts of the body are those that pertain to the lower lip and to the breast. Butlin, in his work on "The Operative Surgery of Malignant Disease," quotes one hundred and sixty survivals for three years and over without recurrence out of four hundred and twenty-four patients operated upon for carcinoma of the lower lip, a rate of a little over thirty-eight per cent. Dennis claims thirty per cent. of survivals for three years and more without recurrence in eighty-one cases of carcinoma of the breast operated upon by himself. It is not probable that the operative work of the future will show any better results in surgical contests with cancer in any part of the body than is represented in the figures just given, until some remedy against the constitutional condition which underlies the development of all cancer, and which too often contributes to the redevelopment of this disease in many patients who have even passed the three-year limit, which is now generally—though in my opinion wrongly—accepted as indicative of the absoluteness which the primary local disease had been extirpated.

Careful and unbiased students must accept with much reservation any claims that are made for operations—whatever their character—for removal of malignant disease of the uterus or appendages, whose ultimate results are asserted to be better than those noted above on the breast or lip. The careful surgical statistician of the present and of the future is compelled to exclude from all consideration in his studies and in his conclusions every case in which the character of the diseased tissue removed has not been examined and certified to by a pathologist of recognized position. The lack of such pathological testimony requires us to reject a large proportion of the reports that have hitherto been made of the results of operative work in this field, especially as to their value as data upon which to base a decision as to the method of operating most likely to secure the best ultimate results.

Equal importance, from the practical standpoints of the choice of operative methods and the ultimate prognosis, attaches to accurate and complete statements as to the extent of the disease present in the cases submitted to this or that operation. The difficulties which attend attempts to properly compare groups of cases subjected to different methods of treatment are so insuperable, the sources of fallacy are so many, that the rational philosophical surgeon will seek rather for the data upon which to found his judgment as to the value of operative methods in his knowledge of the natural history of cancer, its methods of growth and dissemination, and well established general surgical principles.

In the treatment of cancer of the uterus the operating surgeon is continually prevented from indulging even the hope of securing any permanent ultimate good result for his patients by the state of advancement which the disease has been permitted to attain before he sees the case at all. For instance, in my own experience, out of the last twenty cases of cancer of the uterus that have come under my observation, in seventeen the disease had already spread manifestly into the adjacent pelvic tissues, and nothing but palliative treatment for a brief time before the inevitable death was possible. In one case there was room for doubt as to the extension of the disease beyond the uterus, and although the uterine disease was extensive, I removed the whole organ by vaginal hysterectomy. The immediate result was a recovery; the ultimate result is yet to be determined.

The two remaining cases were in the early stages of the disease and eminently favorable for operation. But after my diagnosis had been declared to them they disappeared, probably to find some one who would prophesy smoother things for them.

Of carcinoma of the ovary I have one interesting observation to record in the person of a girl of twenty-five years of age, who, two years ago, presented herself to me with a large solid abdominal tumor, whose upper border reached up to a point midway between the umbilicus and the xiphoid appendix. She knew it had been growing for two years, and probably longer. I operated without delay; the chief complication of the operation was an area of dense adhesions which had formed between the upper anterior surface of the tumor and the abdominal wall; the right ovary proved to be the seat of the growth, which subsequent histological examination revealed to be a carcinoma especially rich in cell constituents. The pathologist in submitting his report predicted a speedy recurrence. The patient made a good and prompt recovery from the operation. She resumed her work as a dressmaker, which for a period of two years since she has continued to perform. Within a few days, while preparing this paper, I called upon her, found her still engaged in work about her house, cheerful, and apparently unaware that there was anything serious the matter with her, but inspection revealed her anterior abdominal wall to be the seat of multiple scattered carcinomatous deposits, the most extensive being in the region of the adhesions that had previously existed with the tumor. In the left axilla was a large mass of enlarged glands. The inevitable fate cannot be delayed many months, I think, but to the credit of the operation must be scored the more than two years of active useful life which she has since enjoyed.

The ultimate effects of the removal of the uterine appendages upon the nutrition of the uterus.—Under this head comes up for consideration the atrophic changes which are induced by the removal of the appendages. With rare exceptions, the uterus, whether hypertrophied by the presence of myomata or in consequence of chronic inflammatory congestion, shrinks to its natural size, or may undergo still greater involution. The myomatous tumors disappear, or cease to grow, menorrhagia is arrested, and an artificial menopause is induced. According to the experience of Tait the age of a patient has a marked influence upon the rapidity and course of these changes. He puts it thus, approximately: Before the age of forty years, seventy out of one hundred tumors will disappear completely; between forty and fifty they may not for the most part disappear entirely, but they will diminish in size sensibly. Out of a total of two hundred and sixty-five cases, in all but eight, the removal of the appendages brought about a complete relief to symptoms either by the complete disappearance of the tumor or its cessation in growth, and the full checking of the menorrhagia. In the eight exceptions subsequent hysterectomy was required.

Permit me to add here a personal observation which illustrates happily these points:

A lady, who had been under my care for ten years or more, was the subject of a small interstitial myoma, producing obstinate menorrhagia, and accompanied with epileptiform attacks at long and irregular intervals. By repeated curettings of the uterus, and by the prolonged administration of large doses of ergot, I kept her along from year to year with the expectation that the natural menopause would bring relief to her symptoms. The age of fifty-one years found her with her condition in no wise ameliorated; she flowed, if anything, more copiously and continuously than ever. Finally I removed her appendages. The operation was done a little more than one year ago. From that day she has lost no more blood, and what is also interesting, she has had no convulsion. Her general health is better than it has been for many years.

In the cases in which the appendages are removed for the relief of chronic inflammatory conditions, the atrophic changes in the uterus are not so prompt and certain as in cases of myoma. The arrest of menstruation is sometimes delayed for months and in some cases never takes place at all.

According to Gloevecke (Arch. f. Gyn., 1889, Bd. 35, Hft. 1, p. 1), taking all classes of cases together, menstruation is suppressed in eighty-eight per cent. of cases; in the remaining twelve per cent. it becomes rarer and less abundant.

What is the effect upon the remaining generative organs of the *extirpation of the uterus only, the ovaries being preserved?* The author above referred to—Gloevecke—is able to answer from the observation of fourteen such cases. He says that after the extirpation of the uterus the menses are always suppressed, and without ever giving rise to vicarious hæmorrhages of any practical consequence. For a while after the operation the times of the usual menstrual crises may declare themselves by vague pains and malaise in the pelvis, such as usually characterize the menstrual molimen. The loss of the uterus appears to have no influence upon the remaining genital apparatus. The vulva, the vagina, and according to all appearance the ovaries also remain normal. It appears certain that the function of ovulation persists intact until the occurrence of the natural climacteric.

I have thus very hastily traveled over a very wide field; my effort has been to summarize in a condensed manner the ultimate results, as I have been able to gather them from the published work of others and from my own observations, which have attended the recent major surgery of the uterus and its appendages. One cannot fail to be impressed, as the subject passes in review, with the vast possibilities of benefit which inheres in this branch of surgical work. Its limitations at the same time are clearly defined. It is no field into which one can venture with rash footsteps. Operative mutilation in any part of the body is to be deprecated, and accepted only when clear proof exists that other measures are futile. Especially should this be the case when organs are concerned which are so intimately related to the higher functions of life as are the uterus and its appendages.

But all the more forcibly does the very important character of the organs involved urge the surgeon—when once the indications for his interference are clearly established and the futility of temporizing methods are apparent—to radical and thorough work, that out of the wreck which has already been worked by disease he may wrest as much as possible for future good.

After Dr. Pilcher had read his paper, he presented the following letter from Dr. Byrne:

BROOKLYN, November 17th, 1891.

MY DEAR DOCTOR PILCHER:

On account of the inclement weather, and the fact that I am suffering from a bronchial attack, it will be impossible for me to attend the meeting to-night. I regret this more because, though as I stated in my note to you some months ago I should not present any set paper, but would merely offer some brief remarks apropos of your report, I had a desire to give expression to some very decided, and I may add adverse, views regarding the advisability of resorting to vaginal hysterectomy for cancer of the cervix uteri. I have proved by careful clinical observation, running through a period of nearly a quarter of a century, and embracing about four hundred operations for uterine cancer, first, that neither death nor danger need be feared by adopting my method of operating—a fatal case having never occurred in my experience as a consequence thereof; and secondly, that by the removal of the diseased part and as much more beyond the supposed line of demarcation, as can be safely taken away with the cautery knife, and thorough dry-roasting of the subjacent parts, an average period of immunity from relapse of not less than ten years may be confidently looked for.

When the hysterectomists can prove as much it will then, and not till then, be in order to institute a comparison between the two methods of treatment. If you deem it proper to incorporate these views in your report and make such other use of the same as you may elect, I would be pleased.

Very sincerely yours, J. BYRNE.

THE ULTIMATE RESULTS OF OPERATIONS FOR THE REMOVAL OF THE UTERUS OR ITS APPENDAGES.

BY HOWARD A. KELLY, M.D., BALTIMORE, M.D.

Read before the Medical Society of the County of Kings, November 17, 1891.

MR. PRESIDENT AND GENTLEMEN:—I never was so puzzled before in my effort to write about a gynæcological subject upon which I felt sure at the outset that I had positive convictions.

The difficulty lies in the exceeding breadth of my title, which covers so many diseases and their consequences. The result of my efforts has been unsatisfactory, and I hope you will therefore appreciate the fact throughout that I came not to instruct any one here present, but because I have some warm personal friends in this Society, and I desire to know what manner of men are those with whom they habitually associate.

It is healthful to discuss ultimate results of operations if only for this one reason, because there has been a large tendency on the part of the community and many doctors to talk about the *immediate results, as if they were the ultimate.* I am therefore glad to take up the subject under such a caption if I accomplish nothing more than to categorically review the various diseases, filling in each query as to ultimate results with a negative. Inasmuch as there is no question of greater importance to the gynæcologist than the *results* of his work, I need not ask you to excuse a little preliminary hermeneutical skirmishing to reach a common understanding. "*Results,*" scientifically speaking, are "consequences," and the "results of operations" are those sequelæ or consequences which arise from the operation, and depend upon it for their existence.

This is not the way you and I always look at this matter, and the rest of the profession and the laity always use this expression "result of an operation" as meaning the sum total of the patient's comfort or discomfort at any given period after an operation, "*result*" is made synonymous with *status præsens;* and this is not without a measure of justification, for the surgeon and patient are often mutually engaged at cross purposes, the surgeon operating for a tumor or an inflammatory mass, while the patient simply requests relief from a pain. The removal of the tumor does not always remove the ache, and the consequence is that the patient complains the result is bad, while the surgeon affirms that it is good. I do not think that we are justified in adopting the purely scientific surgical standpoint. I urge, therefore, that we accept the more practical definition, using the word "*results*" to define the condition of a patient after an operation, both in relation to the operation performed and to the measure of relief obtained from those subjective disturbances which had apparently been caused by the disease. The "result" is then the condition in which a patient finds herself at any time after an operation, which can in any way be attributed to or connected with the operation, positively or negatively.

What I have just dwelt upon may sound like unnecessary refinement and word-juggling, but I assure you, gentlemen, it would save much heartburn in the world and much unjust reproach if surgeons were more careful in seeing that their idea of results expected, and the patient's ideas coincided before the operation.

Results are *proximate* and *remote.*

Proximate results are those immediately following upon the operation.

Remote results are either the immediate consequences which persist, or those new features which develop, after months or years, as issues of the operation. The time value of the word "remote" varies greatly. In the case of an operation for cancer a few months often determines the remote result in the recurrence of the disease, while after removal of tubes and ovaries several years are often needed to determine the remote results.

Before going further let me plainly affirm that the statements now about to follow are purely dogmatic and *ex cathedra*, and liable to personal bias. I only ask for them such weight as attaches to any simple expression of my opinions in the medical community at large.

Some grouping of diseases is absolutely necessary to the further discussion of the remote results. I would, therefore, discuss in a general way the results of operations: 1, in nervous diseases; 2, in some simple cystic diseases; 3, in pelvic inflammatory diseases; 4, in myomata; and 5, in malignant diseases.

1. Nervous diseases, which include all those affections in which local and reflex nervous disturbances are pronounced, without any or with but slight demonstrable pathological changes, such as ovaralgia, neuralgia of the ovary, so-called chronic ovaritis, perioöphoritis with slight adhesions.

The results of radical operations immediate and remote in these cases are almost uniformly bad. The patients continue to complain indefinitely of all their old symptoms, with the aggravation of a horde of new ones peculiarly trying to weakened nerves. Thus are added all the symptoms of the menopause artificially induced and greatly exaggerated; the flushes are worse and more frequent, the sweatings profuse, the headaches severe, peculiar giddy feelings often arise, palpitations and shortness of breath are common, the digestion is disturbed, abdominal pains the patients say are worse than before, the back aches, defecation is painful, and walking difficult on account of the pains down the thighs; and if there are any more symptoms in the category of female complaints, add them to the list, for the patient will immediately recognize each ailment and claim it as her own.

Results in this field are so bad, so persistently bad, that every surgeon must shun these operations, except in cases of dire necessity.

I read the following letter but recently received from a patient operated on by an excellent surgeon a whole year ago, as typical of the results of operations for pelvic algias without demonstrable physical basis:

November 4, 1891.

MY DEAR DOCTOR:—What do you think of my waiting one month longer, or until after my next period, before deciding about an operation to see if there is any change in my condition? Procrastination is not one of my faults usually; but, in thinking over the conversation I had with you yesterday, I cannot as yet feel willing to submit to another operation. It is impossible for you to know the fearful agony I passed through just one year ago (and before that I had gone through a slight operation, as I told you, by Dr. A.). In May last I submitted to still another, and yet I suffer, God alone knows how much. Do you wonder that I shrink from the very thought of again going through so dangerous an operation, knowing as I do now how I must suffer. Experience alone can teach any one what the agony is. I was told before that I would not suffer, but I am glad that you do not tell me this. Could you know all connected with the operation performed last November, you would almost wonder that I could ever again have faith in any one. I do not want you for one moment to think that I do not fully appreciate your advice and your kindness and willingness to do all for me you can; but I am simply writing to let you know how I feel about an operation, and to ask if you think there is nothing else that you can do for me. Do you think it possible that my sufferings now could come from any other cause than the ovaries? I suffer so much more with the left side of my stomach, hip and left limb, and so often after exercising or being on my feet (even in going down to see you yesterday), I feel as if I had fever in those parts from my hip to my foot; I scarcely feel it at all in my right side, but I am seldom if ever without pain or soreness in the left side of my stomach; I can never lie comfortably on that side. Could there be inflammation anywhere? As to my periodical sickness I do not care about its continuing, if only the pain could be relieved and my general health not impaired. As I am in my thirty-eighth year, might it not be that Nature would stop it soon? Do you think the trouble with my head proceeds from this other trouble? My head seems to me one of the most important things. It makes me very anxious; for it seems only natural to me that such constant pain, burning, and often confused and queer feelings in my head, should in the course of time lead to something serious. I cannot bear the least excitement or fatigue; or if I think or allow myself to worry over anything, I suffer fearfully with it. When I reached home yesterday I was just worn out, and scarcely slept at all last night. Even as I talk in a quiet way, I feel every word through my head. I cannot so much as sit in a room and listen with any comfort to music, of which I am so fond; then, too, it seems so sensitive both to heat and cold, and a sudden bright light always sends a thrill through it. As a general thing my head is hot and my feet and ears very cold. I know it has grown worse in the last six months. I do not give way to these feelings, but try always to fight against them; nor is it my disposition to be imaginary. I make myself, no matter how badly I feel, do some little things each day. I am not an indolent person by any means, and have often been told by those who knew me well that I have too much energy for my strength. It always makes my head more painful to look down. I can only sew or write a little at a time and often cannot read at all, and it also hurts me to turn my head to either side. I do not know that all of these little things are of importance; but when I go to your office, to save my life I cannot think to tell you just how I am. It worries me afterward; for if you know just my condition you can judge better what to do. Please tell me if the operation you advise is not laparotomy—the same I had last fall? and if you consider it as dangerous or more so than it was the first time; and do you mean by advising me to have it done that there is nothing else but that you can do to relieve me; is it the very last resort? Is there danger of anything serious resulting if I do not have the operation, more than I must suffer each month, and am I likely to grow worse? I cannot always take a walk, but do so when my hip and limb are not too painful. Pardon so many questions; but please be kind enough to tell me frankly just what you think; you need not feel afraid of alarming me; I want to know my exact condition and just what to expect. I never get excited, but try to be contented at whatever is sent me to bear. I forgot one thing: Always during my periods, and occasionally at other times, I have severe pain in the lower part of my stomach and back when my bowels act; and for six months or more I have been more or less constipated. I have tried to tell you all of my symptoms, and you may depend upon what I say. I am not exaggerating at all, nor am I in the least dissatisfied in any way with treatment. I have grown somewhat stronger, and am surely not so nervous since I have been under your care, and I think my digestion is better. I hope I have not exhausted your patience, doctor; but I feel that this is a serious as well as an important question to decide.

Very respectfully yours, ETC.

What a sad plaint. How tenderly we must care for one whose life is so marred. How superlatively careful we must be not to add one to the list.

In conclusion may I refer to a feeling which is abroad which will, I think, be corrected by such healthful discussions as this. We have all grown up with the impression that the uterus and ovaries are very mysterious organs, and their removal is followed by some equally mysterious changes, so that women are, as an old essayist insisted they always were, no human beings, but some indescribable entity with peculiar strange passions and feelings. I do not hesitate to brand such notions as mythological nonsense—pure figments of the imaginative brain.

Again, some good surgeons are so myopic that the few cases in which they have failed continually fill their visual field, to the forgetfulness of the vast amount of good work they have done. These men occasionally croak out and talk about results as if they were arraigning the whole profession. The dignity of our noble work refuses to let me plead, even for a moment, as an accused criminal at the bar.

2. *Results in some simple cystic diseases.*—The ultimate results are good in simple cystic diseases of the ovaries, such as large cyst of the Graafian follicle, sometimes as big as an orange, and cyst of the corpus luteum, half as large; in parovarian and simple ovarian cystoma. The pains which hung around the pelvic girdle and centred in the diseased organ are definitely removed, and that without the distressing phenomena of an artificially induced menopause, because the fellow ovary is usually free from disease and is not removed.

3. The ultimate results in the severer grades of pelvic inflammatory diseases are of the best, enough to fill the gynæcologist with enthusiasm for his work.

The remote result is a senile condition of the uterus; hernia occasionally, cramps from bowel adhesions, and irritating vaginitis are among the unpleasant results which may persist or arise. I do not know about sexual feeling at a late date. I do know that it is destroyed by inflammatory disease, and if the operation fails to restore it, it must not in the end be claimed that the operation destroyed what did not exist before-hand.

The one great common result in these cases is complete restoration to health.

I cannot pass over this class without reference to one disappointing group. It occasionally happens after the removal of a pyosalpinx or a hydrosalpinx or appendages embedded in old pelvic peritonitis, that the patient continues to complain of her old pains for a long time after. This is apparently due to a condition of the nerve tissues, induced similar to that in the class of purely nervous cases, which they closely resemble now that all disease is removed. We can never foresee this result, and must therefore observe the general rule of never promising a perfect cure.

4. *In myoma uteri.*—In myomatous uteri the results are a simple removal of the distresses occasioned by the tumors. Hernia sometimes follows suspension of the stump.

5. *Malignant disease.*—Lastly, as to the results in malignant disease of the ovaries or of the uterus, including ovarian cystomata. Where the infection has not spread to neighboring structures, infecting the pedicle in sarcoma, or the peritonæm in papilloma or carcinoma, the result is a lasting recovery. It is important to assure such a result by making the pedicle as far from the disease as possible.

I removed a uterus for angio-sarcoma, as large as a man's head, a year ago, and the patient is now well, without recurrence.

In carcinoma or malignant adenoma corporis uteri the results are most favorable. I have operated upon a number of these cases, the uterus in several being as large as the fist. They are all well to-day.

When epithelioma attacks the cervix uteri the problem is a difficult one. Here the retrospect is far from encouraging. Out of a long series of vaginal hysterectomies but few are living without recurrence. Recurrence is the almost invariable rule. The patients have a few months or may be a year of respite, and then slowly the disease returns, choking the pelvis, producing the peculiar cancerous marasmus, and the patient dies of exhaustion or nephritis.

We want a better operation for this disease.

DISCUSSION.

Dr. SKENE.—I made a promise, Mr. Chairman, to the Surgical Committee and yourself to keep the peace so far as saying anything on any scientific subject. I wish now that I had not done so, because I might have been prepared to state one or two facts without taking time to offer arguments to substantiate them. The question referred to by Dr. Pilcher in regard to the influence of removal of the ovaries on the sexual characteristics was discussed fully in a paper that I prepared a number of years ago, and was published in the *Annals of Anatomy and Surgery*, edited at that time, as now in modified form, by Dr. Pilcher. The reason I suppose for his not giving me credit in discussion is one which entirely excuses him, to wit: an editor is not supposed to read anything in his journal which he has not written himself. Had he made an exception in my case he would have known his subject better. The ultimate results of those operations will depend very largely upon the operator and what he operates for, and so the results will vary in that way.

I was pleased to hear Dr. Kelly say that removal of the ovaries for certain disturbances of the nervous system as a rule is a failure. While giving attention to the subject of insanity and nervous affections as related to gynæcology, in conjunction with Dr. Shaw, quite a number of years ago, we settled many of these questions to our own satisfaction. In my subsequent experience and observations I have found that in removing the organs in the hope of relieving diseases of the nervous system, epilepsy and other less important affections, the results have been unsatisfactory oftentimes. I have also seen various nervous disturbances, which caused great suffering, produced by the removal of the ovaries and tubes, most of them in the practice of the so-called wonderfully successful surgeons. I do not believe that the removal of the ovaries or tubes, or the uterus even, is very likely to produce diseases functional or otherwise of the nervous system if they are removed for good reason. The best results that have been obtained so far have been when organs have been removed that were and had been for a long time diseased and functionally useless for some time. The results in that class of cases are admirable, and the effect on the nervous system, as a rule, is beneficial. The removal of the ovaries, unless they are in this diseased condition, is very likely to be followed by nervous disturbances, which make the patient's last condition worse than the first.

Those are a few points, sir, which I thought I might venture to call attention to. I believe they have all been touched upon, and yet not looked at from the same standpoint. Every general surgeon has good results in removing a member that has been long diseased—better results sometimes than in removing limbs that have been injured in strong, healthy people. I presume that is an established fact. And so it is in gynæcology, in removing these suppurating tubes and ovaries that are destroyed and have been for a long time, and that cannot be taken care of by general treatment—their removal is almost invariably beneficial in every way.

Now, sir, with your permission I would move that the thanks of this Society be extended to Dr. Kelly and to Dr. Field for their courtesy and kindness in coming here to aid the Surgical Committee in dealing with one of the most important medical topics of the age.

(The motion was seconded and carried, and a vote of thanks tendered Dr. Kelly and Dr. Field.)

I would like to say a word about Dr. Kelly first, because he came farthest to instruct us. I remember in his junior years in the profession he crowded the older men so persistently that their heels were in danger, and when they turned round to see who was after them he simply shot past and got into the front rank, and took a place in one of the institutions which is recognized to be first among the foremost in this country.

I was reminded of that the other day, when I asked a lady who came to see me from Philadelphia, how the City of Brotherly Love was getting along—"Well," she said, "it always was slow, and since Dr. Kelly went to Baltimore it is dead and buried." That was a well-deserved compliment to Dr. Kelly as a man and a scientist.

He made one statement which I have heard before but never believed it to be true until he made it—I always thought it was slander. It is that marriage proves that man is more valuable than woman, because in marriage the woman is given away and the man is invariably sold. Now I believe that when Dr. Kelly gave away a woman in marriage without ovaries the groom was badly sold.

I am sure I express your feelings when I pay my respects to Dr. Field. It is always gratifying to have our neighbors from

New York come to see us and discuss subjects in medicine, and I happen to know that we have more than this reason to be on good terms with Dr. Field. Some of our patients go to New York, and some we send, and those who go to Dr. Field, if they are all there when they go, they come back altogether; otherwise sometimes they go, and come back in sections and we cannot put them together. Dr. Field is doing a most admirable work, and though he was exceedingly modest, I am sure that his observations will go further than those of any one man I have encountered in a long time to keep gynæcologists within bounds. I am sure we are all exceedingly indebted to both gentlemen for their kindness in coming to us, and I am sure all of you are desirous of making it so pleasant for them that they won't want to go home, but, if they must do so they will come again to see us.

Dr. Pilcher.—It seems to me that, as a result of our discussion this evening, there has been some clarification of our ideas with regard to the field for operations for the removal of the uterus and its appendages, and that all of us must carry away from here a clearer appreciation of what is to be expected from such a class of surgical operations. The remarks which have been made by each of the gentlemen who have taken part in the discussion have been pertinent to the subject which has been presented to us—a statement which cannot always be made of discussions in medical societies. There is nothing that has been said that I do not find myself in perfect accord with.

I would like to call attention, however, to an inference which might be drawn from the remarks of Dr. Field, whose presence here this evening and share in the discussion is warmly welcomed by us all, and that is to the still greater importance which might attach to the knowledge of the condition for which the operations of which he finds traces were done originally. The fact that he found more of these insane persons presenting themselves with indications of such operations a while back than he does now, and the fact that a while back there were more of these operations being done for general neuroses, and now more operations are being done for inflammatory conditions, would seem to indicate that in a large majority of these cases, at least, the tendency to mental trouble antedated the operation, and that the operation had simply failed to cure them.

The cases reported by Dr. Palmer are extremely interesting and pertinent, and are in a line with some statements made by Tait himself as to the occurrence of increase in sexual desire after the operations which he had performed. It seems to me that possibly this might be explained in two ways. There is combined with the spirit of women, to a very large extent, a tendency to repress the sexual desire from their knowledge of the results which often arise from its gratification, so that as long as they fear the possibility of pregnancy, there is a continued tendency to check this and not to foster or give way or to indulge in any way in such feeling. The knowledge, however, of the fact that by the operation having been done, all such dangers and unpleasant consequences from the indulgence of this appetite are taken away, may be sufficient mentally and morally to unloose this tendency which before existed, and it is simply in a line with what I have called attention to in the course of my remarks upon the subject, that the sexual appetite is dependent upon general influences rather than upon the local presence or absence of these particular organs. Then again, as the result of the disease which may have existed in these cases there may have been an inhibition of this appetite, and by the removal of the disease this inhibition has been lessened and the appetite permitted to have its free sway. So in these cases there may be a dual explanation of the occurrence of subsequent increase of sexual desire.

As to the extremely disastrous effects to the morals of the patients which Dr. Palmer described as having occurred in two of his cases, that it seems to me must have excited our curious interest, and it is a fact which may be worthy of putting in the literature of the subject for our passing gratification.

The more that I have studied personally the field which we have gone over this evening, the more thoroughly I am convinced that in this field is to be found one of the greatest advances of the present day, and that future results, as we gain more experience both in the diagnosis of the conditions that demand operation and in the ability upon our part to cope with the conditions and bring about the best operative results, will be more beneficial.

I wish to express my extreme regret at the absence of our esteemed colleague, Dr. Byrne, whose share in our professional work in this city for so many years has been a source of so much benefit and advantage and honor to us all. I sincerely trust that his indisposition may not be a serious one, and that the work which he has done, which has accomplished so much for humanity, and which can be pointed to with so much pride both by himself and his colleagues, may continue to be done by him for many years.

Dr. Jones.—The paper of Dr. Pilcher so accurately and scientifically expresses my own views on this subject that it is with extreme diffidence I arise to discuss extemporaneously this important question. In regard to the ultimate results of operation for the removal of the uterine appendages, so far as my experience goes, the best and most immediate beneficial results are obtained in those cases of pelvic disease in which the symptoms point to the formation of pus in these cases and real degenerative changes have occurred, so that there is destruction of the essential tubal and ovarian structure.

In such cases, with tubes and ovaries embedded in plastic exudate, there is no excuse for a single day of delay, the one indication is incision and removal of the disintegrated structures by abdominal section. If such cases are allowed to go on, one of two results follows : leakage naturally occurs from the tubes into the peritoneal cavity, and in time may develop a fatal suppurative peritonitis ; or, on the other hand, the adhesions become more extensive and the exudate more dense and finally organizes into firm bands of false membrane.

In order to obtain the best results, operation must take place while the inflammation is recent and the exudate unorganized. Adhesions once formed are prone to re-establish themselves, so that after operations they reform to a greater or less extent and attach themselves to other pelvic organs, giving rise to a certain train of symptoms which have been described as sometimes following these operations.

So far as I am aware, pelvic surgeons do not operate for reflex disturbances and hypothetical symptoms on account of reflex nervous troubles, but for manifest structural disease.

As a rule mere neurotic cases are not advised to subject themselves to an operation. But when we meet with a case in which the health had been undermined by acute or chronic structural disease of appendages, that patient is almost invariably improved, both mentally and physically, by an operation, and in many cases chronic invalidism is prevented.

As far as mental disturbances after these operations is concerned, I can only recall one case in which that has followed, and this patient happens to be addicted to the use of alcohol, unknown to the surgeon at that time. After the operation she continued the habit.

THE GENESIS OF MALIGNANT DISEASE OF THE CERVIX UTERI.

BY WALTER B. CHASE, M.D.

Read before the Brooklyn Gynæcological Society, October 5, 1891.

The ætiology of malignant disease is not yet sufficiently understood by the pathologist to make certain whether it is primarily of local or constitutional origin. Formerly it was the accepted opinion that cancer was the local manifestation of a constitutional disease. It was, therefore, regarded as a fatal malady and the sufferer was given over to hopeless despair. Notwithstanding this, later experience showed that in a well-authenticated case recovery followed excision of the diseased part, though common observation teaches, that in the vast majority of cases the disease returns after a longer or shorter interval.

In the light of modern pathological research, the contrary opinion is gaining ground, that cancer is primarily a local disease, and that the systemic contamination is secondary. It is apparent here, as elsewhere, that the pathological condition must be the basis on which rational treatment can be formulated. In the presence of malignant disease, from the surgical standpoint, the rule is early and complete removal of the local growth, in the possible hope it will not return—a hope, which unfortunately is seldom realized.

Such was the treatment of surgeons of recognized ability for many years. Such was John Brown's practice, and to-day the rule remains. Perhaps the accepted doctrine of the pathology of malignant disease is the presence of cells normal to the body, but out of time and place.

Some hold that these cells have developed where found, while others believe them to be congenital.

It is not in keeping with my present purpose to discuss cellular pathology, but to consider to some extent the genesis of malignant disease as related to the development of cancer of the cervix uteri.

Its occurrence is so frequent that it forces itself on our consideration, and its sway so relentless that we stand almost paralyzed in its presence and the possible hope, however remote. On the authority of Thomas, statistics show that cancer is three times more frequent in women than in men, and also three times more frequently met with in the uterus than in other organs. He also states that the decades in a woman's life, as regards its frequency, are in the following order, viz.: 40 to 50, 30 to 40, 20 to 30, and 50 to 60, and that few occur before 20, or after 60.

It also appears that race exercises an influence on its development, as it is far less frequently met with in the negro than in the white. Emmet has seen but one case in the African. I have met with but one, and that was the patient of a physician in this city. This was a case of epithelioma of the cervix, and when I saw it, had already passed the stage where surgical aid could be availing.

In the Twenty-second Annual Report of the New York State Woman's Hospital, out of 2,153 patients admitted to the hospital, sixty had malignant disease, a percentage of 2.75 per cent.

The common belief among those who have had facilities for large observation is, that the majority of sufferers are those who have enjoyed more than average health, and that the better classes suffer more than the poorer.

Another factor in the ætiology mentioned by Skene, Emmet, and Thomas is that cancer of the uterus is in proportion to the frequencies of pregnancies.

Emmet in his latest edition of "The Principles and Practice of Gynæcology," gives some instructive and interesting statistics on this point. He states that in over sixty per cent. of these cases the disease was (in its inception) confined to the cervix.

Goodell says cancer of the womb usually begins on the vaginal portion of the cervix and creeps upwards, and that the part first attacked is the cervix, which bears the brunt of coition and parturition. His experience leads him to believe cancer of the body of the uterus to be emphatically a disease of old maids and sterile wives, and in the great majority of cases, cancer of the cervix starts from laceration, and is almost always found in women who have borne children. Certainly, of all the pelvic viscera the cervix is most exposed to the influence of traumatism and irritation.

In striking contrast with this is the very infrequent occurrence of malignant disease of the cervix in virgins. I have never seen a case. Among the reasons which lend credence to the theory that malignant disease is of local origin, is the fact that it almost always appears, in its primary manifestation, at one point. The most perfect type of hereditary disease is tubercle, and in its primary appearance is almost always multiple. The same is true of syphilis and eczema in their hereditary appearance. This is rarely ever true in cancer, and when the exception is found, it is usually in sarcoma, which of all cancerous diseases is least malignant. Cancerous disease usually appears in glandular organs ; hereditary manifestations often appear in other structures. It is also a noticeable fact in women, that after the uterus, the mammary gland is most frequently the seat of cancer.

It is also worthy of consideration that both these glands are subject to recurring periods of great functional activity and functional repose. This activity is, or should be, purely a physiological manifestation. Unfortunately such is not the case, for what organs oftener suffer variations from healthy activity or structural change? It is also observed that the time of the greatest physiological activity of the one is coincident with the period of physiological rest of the other. During gestation the active physiological processes are in the uterus ; after parturition the uterus is quiescent, and the mammary glands take up their important functions—for the time being, the one or the other sustaining the heaviest burdens imposed upon motherhood. Both these organs are liable to accidents inseparable from the function of reproduction, the one to lacerations of the cervix from a variety of causes, the other to injuries and disease of the nipple and mammary gland, with consequences more or less serious.

Again, the recurring physiological activity of these organs is, in a sense, independent of the other organic functions, as they manifest themselves only in the sphere of woman's sexual life. But these physiological processes are not limited to the function of reproduction only. Ovulation and menstruation are also cyclic in their manifestations, and their functions have the same limitation, and in both the pathological often supplants the physiological.

These facts are suggestive of questions of the greatest interest as related to the ætiology of this subject.

1. The recurrence of periods of great physiological activity, as related to the genesis of malignant disease of the cervix.

2. The influence of traumatism and its results on the structures in the subsequent development of cancer.

3. The results which follow the cessation of these physiological processes, as seen in the retrograde metamorphosis of these organs and its relation to those pathological changes incident to malignancy.

These questions open up topics, the discussion of which cannot be undertaken in the time allotted to this paper, and only some inferences therefrom will receive consideration.

Unfortunately in the practice of obstetrics the ideal is not always attained or attainable. The risk of injury to the cervix is always present.

Premature rupture of the membranes, a rigid os, a tedious or a precipitate labor, previous disease of the cervical canal, and the hazard of manual and instrumental deliveries may result in unavoidable laceration.

These consequences may be far reaching and serious, or only trivial and temporary.

As a rule, antero-posterior tears heal spontaneously ; those lateral may or not—often do not—for reasons well understood.

This history of cases in which spontaneous recovery did not take place, or in which appropriate surgical aid was not applied, would present strikingly similar symptoms. It would include the recognition of so-called ulceration ; a healing of the abraded surfaces under the influence of caustic or alterative applications; a belief on the part of the patient (perhaps indulged in by the attendant) that she was cured; a relapse; another period of treatment and supposed cure, succeeded by a series of relapses—whenever treatment was long suspended, until the patient lost hope and the doctor a patron. Doubtless all of you have had not a few cases of this kind drift under your observation and care. As a rule, such histories ought to belong to the past, but unfortunately such is not the case.

I have no statistics to present—I do not know that they are attainable—to show the proportion of those having cancer of the cervix who had previously suffered from this injury. I believe I never saw a case where prior existence of this accident was not present, if determinable, neither have I observed a case of its development after successful repair of a torn cervix. In these particulars it will be interesting to know your individual experience.

A gaping cervix exposes a surface, sensitive, probably excoriated, which should be covered and protected. It is subject to various irritating agencies, and if healing occurs without union, the resulting cicatricial structure may be as sensitive, or even more so, from the imprisonment and pressure on nerve filaments, and this is an added source of reflex irritation.

The body of the uterus in which cervical laceration is present is often in a condition of hyperplasia, or has not undergone involution (the latter condition is very frequently met with), either of which may weaken the ligamentous support, and prolapse more or less pronounced follows, and in its wake are found irritation and friction.

So far, then, as traumatic influences may be factors in the production of malignant disease, it is not absent in the child-bearing women.

The influence of pipe-smoking—now less frequent than formerly—as associated with epithelioma of the lip, has a similar significance.

Emmet says, and his opinion is entitled to great weight, for the lesion of laceration of the cervix and its appropriate treatment were first enunciated by him, that nearly all cases of epithelioma have their origin in laceration of the cervix, and that it springs from an effort to repair the local injury.

Goodell attributes its presence to the same cause.

It should be remembered that in the effort of nature to repair this injury, where healing or partial healing follows without union, the opposing surfaces are not restored to their normal relations. As a result, these deeper structures, lying between the free border of the cervix and the cervical canal are covered with mucous membrane, scar-structure, or by an abraded surface. What more favorable condition can be found for the development of epithelioma?

Is it surprising that such structures take on reckless cell-proliferation?

While with our present limited knowledge positive declarations cannot be made concerning the ætiology of cancer in this location, the inferences are unmistakable. The frequency of its manifestation, as related to the frequency of parturition and its rarity in the virgin, leaves but one logical deduction, viz., that while it does not eliminate the doctrine of heredity, the conclusion is rational that traumatism and its results, as seen in laceration, are the prime factors in the genesis of cancer of the cervix.

Presumably the great functional activity incident to parturition enters in as an element, but the connection is not so evident. So also the normal decay of functional activity and the changes incident to it, as witnessed in the establishment of the menopause, may and probably do bear a close relation to these pathological developments.

Briefly, then, what is the duty of the obstetrician and gynæcologist in the premises? Clearly this: to place around parturient women all known safeguards against this accident. In event of laceration, the degree, the patient's condition, and her environments will determine as to the time of repair, whether primarily or secondarily. The question of operation at a period of time subsequent to convalescence after confinement should receive very careful consideration.

Absence of some of the symptoms which usually accompany it will not of itself justify any neglect of the case.

To formulate a rule for operation in all cases is not easy; careful, discriminating judgment of every case must decide.

After a pretty large experience in this class of cases, I am prepared to affirm that no operation in minor gynæcological surgery, in properly selected cases, is attended with more satisfactory results, both as regards the patient and the operator.

How much weight, if any, the risk of the development of cancer in the presence of laceration has to do with the individual, or the profession generally, in forming judgment as to the performance of this operation is unknown, though presumably little, for ordinarily it is regarded as a question of expediency and not of necessity, for it is the comfort and usefulness of the patient rather than her safety which is involved. It it can be established by observation and experience that this accident and its results are the principal agency in the genesis of malignant disease of this organ, then this risk must be included in the question, "What is conservative procedure, and what its limitations?"

To its elucidation the results of your observation and experience are solicited.

DISCUSSION.

Dr. Byrne.—I have very little to say, except to commend the general tone of the paper. There is no question whatever in my mind, and I think it is the sentiment of most authorities, that, though the existence and influence of hereditary taint or predisposition cannot be doubted, yet, in many instances, the exciting cause, at least, is traumatism, as suggested by the author of the paper.

In about four hundred operations for cancer of the cervix and body, in various stages, I have seen but two cases in young unmarried women under thirty—one was twenty-six, and the other twenty-seven. Indeed, fully ninety per cent. of all my cases have been multiparous women, showing that injuries due to and often inseparable from parturition are important ætiological factors in the production of uterine cancer.

Though it is rarely possible in cases of cancer of the cervix uteri, which are brought to us for examination and operation, to say whether the cervix has been lacerated or not, yet, I think such negative evidence should have but little weight.

There is no doubt in my mind but that the lacerations, so frequently seen nowadays, are due too often to the premature injudicious or unskilful use of forceps. I think the number of lacerations of the uterus have increased in about the same degree that vesicovaginal fistulæ have, in late years, become comparatively rare, and that the too frequent use of forceps in delivery, while it has saved the bladder, has frequently resulted in serious injury to the cervix and perinæum.

Dr. Raymond.—Has Dr. Byrne ever observed a case in which he recognized a laceration, in which cancer subsequently developed?

Dr. Byrne.—I cannot, at this moment, remember an instance, and yet I must have seen such.

Dr. Raymond.—In the two cases of epithelioma of the cervix in unmarried women, was there any traumatism that you could trace?

Dr. Byrne.—Of course you cannot always rely on the statements of patients, but I think not. There was one that may have had her uterus tinkered with, but I could not say. They were both unmarried, and neither had borne children.

Dr. Corcoran.—Referring to Dr. Raymond's question, I would recall to Dr. Byrne's mind one case on which he operated, where the diagnosis of laceration was made before the determination of cancer. I saw the patient in the spring. She had such a badly lacerated cervix that I advised its removal in preference to any operation for repair. For some domestic reason, and on account of the hot weather, she did not come into the hospital until the fall, and then there was no doubt about the presence of carcinoma.

Dr. Byrne.—I now call to mind the case referred to, but it must be remembered that these patients usually fail to apply for relief until the disease has become far advanced, and too often incurable. Out of 367 operations, according to my statistics, in 144 the disease was limited to the cervix, and of these there were only sixty-three, or about forty per cent., confined to the portio vaginalis. The entire cervix was involved in eighty-one out of 367 cases, but in over sixty per cent. of the whole number the disease had made inroads on the corpus, and nothing beyond palliative measures of treatment could be resorted to. With regard to the treatment which I have pursued in this latter class, I would simply remark that it has been gratifying to notice what a long respite may be obtained by means of the curette and cautery in these utterly incurable cases. One had no return for six years. Another, where the entire cervix and a portion of the fundus was involved, has had a respite of thirteen years. She returned to my office three or four weeks ago, after an absence of years, in which she had enjoyed good health. Her pelvic organs were perfectly free from any disease, but she was developing cancer in the cervical and submaxillary glands. Many cases travel around for years in comparative comfort, where formerly nothing was done to alleviate their suffering, but syringing, and the application of various substances, with the vain hope of preventing the disease from spreading.

Dr. Matheson.—Does Dr. Byrne remember a case he operated on in 1872, in President Street, between Smith and Hoyt? The patient has been under my observation since then, and she is living and well.

Dr. Byrne.—Yes; that was a very unpromising case.

Dr. Maddren.—In the cases in which you have operated, in what proportion was there no recurrence?

Dr. Byrne.—I cannot give the exact figuers from memory. In the cases where the disease was limited to the lower cervix, I think there was an average of eight years; there were no deaths, no return of the disease at the time of my report, and there were some who had gone ten, twelve, thirteen, sixteen years, without a recurrence. In the more severe cases, where the entire cervix was involved, there is an average of six years given to each, which is probably the most remarkable fact on record, as regards the treatment of uterine cancer.

The subject is very interesting in connection with the consideration of the radical operation—hysterectomy. Those who advocate hysterectomy undertake an operation which is attended with considerable danger, and very mutilating in its character.

At a meeting of the New York Obstetrical Society, twelve months ago, I was asked by a prominent gynæcologist if I could explain to him the reason why the removal of a portion of a diseased organ gave better results than the removal of the whole. Because I claimed better future results than had yet been obtained by hysterectomy, leaving out of the question the immediate danger of the operation. I said I could not tell; that what I stated were facts, but that I was unable to offer, just then, any satisfactory explanation. I thought of the question a great deal afterwards, and I made up my mind that in the operation of hysterectomy there is a great likelihood of traumatic infection from the handling of the diseased organ in contact with open tissues, and I think still that this is the explanation. I was invited last summer by Péan to witness a hysterectomy by him, and I noticed how very careful he was, before he attempted to sever the uterine connections, to carefully amputate the diseased cervix. He took that cervix away as if he were not going to do anything else. This made an impression on me, and I watched carefully the operation, and, after it was over, I asked him why he did that? He said, to prevent infection, and it was evidently traumatic infection he was guarding against.

I think if hysterectomy is ever to be considered a perfectly safe and justifiable operation for malignant disease of the uterus, or any part of it, that if it can be performed by the aid of the cautery alone, traumatic infection would be entirely avoided. Indeed, I feel so confident of this, that if I ever come across a case, where I feel justified in performing vaginal hysterectomy for cancer, I shall sever all tissues with the cautery knife, and without the aid of scissors or scalpel. With this end in view, it is hardly necessary to add that piecemeal ligation of the ligaments, and not by clamp-forceps, would be the proper mode of procedure.

Dr. McNaughton.—I think it is a question whether laceration of itself predisposes to the development of cancer. I think very likely it is the attempt on the part of Nature to repair the damage done, and there is a cicatricial mass of tissue formed at the point of laceration. I am sure I have seen a number of cases of extensive laceration without that condition, and I should doubt very much whether those cases frequently develop into cancer tissue.

I do not think the mere repair of those lacerations is all that should be done. There are attendant conditions of the uterine tissue that should be looked after, conditions of endometritis, displacements, sub-involution, etc., which, perhaps, have as much to do with the development of that vicious tissue as the laceration itself. In doing the operation on the cervix, that point should be looked after very carefully, and all cicatricial tissue should be taken out. I have seen Dr. Emmet operate for laceration of the cervix, and I was surprised at the large mass of tissue he took out. I presume his object was to get rid of something that might become vicious.

I agree with Dr. Byrne that it is pretty difficult to tell when we see a cancerous mass involving the cervix, whether that cervix has been previously lacerated. I do not think it would be possible to tell, unless we had happened to have seen the case before. The mere repair of the apparent laceration I do not think is sufficient. We ought to go a little further than that.

I have seen, perhaps, a half dozen cases of pretty large apparent lacerations of the cervix uteri in young women never pregnant, due to inflammation of the cervical glands, and after they were scarified and treated with iodine, etc., they disappeared. I should think those cervices might be a fair ground for the development of cancerous tissue.

Dr. Matheson.—I have seen a case a number of times this summer, in consultation, which bears a relation to this subject. The patient three years ago was operated on for restoration of a lacerated cervix. At that time I understand there was no indication of malignant disease, but, at present, malignant disease involves the surrounding tissues to such an extent as to prevent any operative interference. She is the mother of a physician, in Brooklyn, who died two or three years ago. The operation was performed by one of the most skilful surgeons.

Dr. McNAUGHTON.—Dr. Skene is not here, and, as I have a little Scotch in me, I think I can with propriety ask the following question: In the State of New York there are several Scotch settlements, one of which, near Rochester, is my home, and the frequency of cancer in that settlement is perfectly terrific, and this has led me to wonder if cancer is more frequent in the Scotch race than in others? The same applies to a section near Poughkeepsie. I have talked with a physician who formerly practiced there, and he said he had never in any section of the country seen so large a proportion of cancerous troubles as he did there. In both sections the people are second-growth Scotch.

Dr. BYRNE.—I have never heard the point raised. I can hardly believe that either race or country, with the exception of the black race, would make much difference. It is very prevalent among the Chinese, the Tartars, and every civilized country in Europe, and I doubt if the statistics vary much.

Dr. EMERY.—Is the drinking water hard water?

Dr. McNAUGHTON.—Yes, in both sections.

Dr. EMERY.—In several sections of Michigan where hard water is used, cancer is very prevalent. Whether that is a mere coincidence, I do not know.

Dr. MATHESON.—I spent several years of my life in a lime stone region, and I think cancer was the rarest disease occurring in that section. In the early part of my life my neighbors and acquaintances were all Scotch people, and I do not believe cancer is any more frequent in the Scotch race than in any other class of people, and perhaps less so than in some others.

Dr. MADDREN.—Dr. McNaughton's statement would raise the question of a possible bacteriological cause, and Dr. Chase did not bring in that question, because he thought it was excluded by recent research.

Dr. CHASE.—It did not occur to me it was included.

Dr. MADDREN.—Do lacerations elsewhere predispose in any way to the formation of malignant disease? Of course the conditions are different, but would lacerations of the perinæum, for instance, have any such influence? Is it the presence of scar-tissue alone that causes it? If it is, we would look for it elsewhere.

Dr. Matheson.—In the last three cases of cancer coming under my observation, all had a predisposing history. In the case I referred to a few moments ago, the mother of the patient died of cancer.

Dr. Emery.—It has occurred to me that a possible means of prevention of lacerations of the cervix may be found in the diet of the patient prior to the birth of the child, in such a manner that the bones of the head may become soft and pliable, and the size of the child be lessened. This is a point we can study and discuss with some value. Just at this moment I cannot say how much bearing it may have on it. Certainly a soft and small head will not lacerate a cervix as much as a large, hard head. In other words, if the mother is fed upon a diet which will favor the softening of the bones, or rather lessen the hardening of the bones, I think in that way we may expect to lessen the number and degree of lacerations of the cervix. I propose to read a paper on this subject before the County Society in the near future.

Dr. Raymond.—Is Dr. Byrne of the opinion that epithelioma of the cervix is on the increase?

Dr. Byrne.—From a cursory retrospect of a quarter of a century's observation in that particular line, I should say not. I doubt if I see as many cases of epithelioma, or any other form of malignant disease of the uterus as I did some years ago.

Dr. Raymond.—I asked that question, because it occurred to me that, if the fact as you stated it exists, and I have no doubt it does, as vesico-vaginal fistulæ have been reduced, lacerations of the cervix should have been increased. If lacerations of the cervix predispose to malignant disease, then we ought to have more epithelioma.

Dr. Maddren.—On the other side of the question, it is rather the rule to repair those extensive lacerations, which were let go formerly, so it would be an even thing, and, if statistics proved anything, they would prove Dr. Chase's point, that laceration is a cause, and that the repair of lacerations is a prevention. It is certainly very much more extensively repaired than formerly.

Dr. Raymond.—One in a dispensary does not have an opportunity to follow these cases very long, but it is rare to find a married woman coming to the dispensary, complaining of any uterine trouble, that one does not find more or less of lacerations, and some of them enormous, and yet the proportion of cases of epithelioma is, in my experience, relatively small to the number of large lacerations; but, of course, the experience of one individual is not sufficient to settle that question.

Dr. Matheson.—Many cases of laceration are the result of labor without forceps. Formerly, when ergot was so indiscriminately used in obstetrics, it tended to increase the lacerations. The very worst lacerations I have seen were without forceps—that is, forceps did not have any part in producing them.

Dr. Maddren.—Perhaps Dr. Dickinson can give us some light on the ætiology which is involved in the question, whether more lacerations occur from precipitate labor, and other causes, such as too early rupture of membranes, than occur from instrumental causes. I have an impression that, in private practice, more lacerations of the cervix occur without the use of forceps than with them.

Dr. Dickinson.—I think Dr. Emmet has proven this point, and the experience of most obstetricians bears him out: that more lacerations are caused by slow labors than by precipitate labors, therefore, the use of the forceps is rather a savior of the cervix than a danger to it.

The unskilful use of instruments is undoubtedly of danger to the patient. If a man puts the forceps, after the method of Taylor, into a partially dilated cervix, and draws the cervix tense over the sharp forceps blades, he will surely have a laceration, whereas, if he waits until dilatation is ample, he should do no injury to the cervix.

The question is a somewhat vague speculation. Years of study and coöperative work might bring results, but I hardly think such hypothetical questions are of much value.

Dr. McEvitt.—I think we might illustrate the causative influence of laceration of the cervix as a productive cause of epithelioma in this way. We know that probably seventy-five per cent. of lacerations of the cervix occur upon the left side. By observing whether this carcinomatous growth occurs upon the left side more frequently than on the right would help us to find out the amount of influence the laceration would have upon the trouble.

I would ask you, Mr. President, if you, in your experience, have noticed that this growth appeared upon the left side more often than upon the right. As a rule, if a case is seen early where the cervix is involved, the necrotic process can be observed to a greater extent upon one side or upon the other, and by determining the relative frequency of the site of the cancer, it will help us to determine what influence laceration has upon its production.

Dr. Byrne.—I do not think it is contended by Dr. Emmet, or those who think with him regarding causation and the influence, especially of laceration in the development of cancerous disease, that the malignant infiltration, or deposit, selects the cicatrix, or the part of the cervix originally injured. I have frequently found the anterior or posterior lip *mainly* involved, but, though cicatricial tissue is said to be a fertile bed for the development of this disease, yet I cannot remember having seen such an unilateral case of cancer of the cervix uteri. I am, however, convinced of the potency of traumatism as a factor. That cicatricial tissue in the perinæum should not be followed equally often by the development of malignant disease, can be explained by the difference in the two parts histologically.

Dr. Maddren.—I believe Dr. Gross stated that a larger relative proportion of cancer of the breast occurs in those breasts that have not performed their lactative function—that is, that in spinsters, or in those who have never borne children, cancer tends to appear early in the mammary gland; and, in proportion to the whole number of cases of cancer, those who have never borne children are more likely to have cancer of the breast than those who have, so there it would seem as though the performance of function was rather a safeguard than a cause, whereas, it would appear to be the opposite, from the points made by Dr. Chase, with regard to the function of the uterus. I think Dr. Gross has brought out that point, that a breast that has not performed its function, is a little more likely to develop malignant disease than one that has.

Dr. Chase.—Before closing the discussion, Mr. President, I would like to repeat one inquiry I made in my paper—regarding the observations of the members—"How many cases have they seen of malignant disease of the cervix following repair of it after laceration?" Dr. Matheson has related a single case. I would ask the President if he has seen malignant disease of the cervix develop after repair?

Dr. Byrne.—Never to my recollection. I would have had that experience, no doubt, if I had operated on the case Dr. Corcoran reminded me of, but the cancer was there already, and the delay was fortunate.

Dr. Chase.—Will Dr. Matheson please state how long a time (in the case he related) elapsed before the development of malignant disease?

Dr. Matheson.—I think the operation was performed some three years ago. I first saw the case last winter, and there was every appearance of a previous traumatism. The cancer then encroached upon the surrounding tissues, and involved everything in that vicinity.

Dr. Chase.—This matter must necessarily be largely speculative, because, as I stated in my paper, we are not in possession of facts sufficient to allow us to make deductions, which are at all positive in their character. Now, the experience of our President in the management of malignant disease is certainly a very suggestive one in this particular line. He has operated in four hundred cases, and in only one-half of one per cent. has he witnessed malignant disease in women who have not been pregnant. Certainly, in this individual experience, there is a very close connection between the fact of pregnancy and the development of malignant disease.

Another fact in that connection is the experience of the gentlemen present, that, so far as our knowledge goes, there has been the development of cancer of the cervix in only a single instance after its repair. I had hoped to get the statistics of some men of large experience, and it was not my intention to read the paper until these were obtained. I simply presented it at this time as a courtesy to another member, who was not prepared. We must have large statistics to draw conclusions which will be satisfactory.

I fancy the relatively few operations which have been performed for the restoration of the cervix had very little bearing on the aggregate number of malignant cases of disease of the uterus which occur, for it is only a very small percentage of women suffering from deep lacerations that ever receive any surgical aid.

[Note.—January, 1892. Since this discussion, I have received a communication from Dr. Graily Hewitt: "My experience has shown me that cancer of the cervix is far more likely to occur in women who are married, or who practice sexual intercourse, than in virgins. This would favor the belief that physical injury to the cervix * * * decidedly predisposes to cancer of the cervix."]

If the experience of our President is any guide, it is very suggestive that the relation, as I said before, between the injury—or, at least, some influence of parturition—and that of development of cancer is present.

As suggested by Dr. McNaughton, it is not to be presumed that laceration itself is the only cause. I can understand very readily why other changes—inflammatory changes, for instance—as well as new proliferation of embryonic cells, or heredity, might alone be a sufficient cause; and then, again, the difficulty of seeing these cases sufficiently early to determine whether laceration is present. I have seen cases in which it was evident that in the early progress of the disease there had been a laceration.

One of the authorities to which I referred to-night, states that in about fifty per cent. of the cases of cancer, the disease primarily originated in the posterior lip. Now, I apprehend, sir, the question Dr. McEvitt puts, regarding the location of cancer of the cervix, if the answer is ever found, it will be that it does not develop in the angle of the laceration, but in the anterior or posterior lip, and I believe that is coincident with the experience of the President.

I simply raised the question in my paper, inferentially, whether the repair of the cervix was a safeguard against the future development of malignant disease. I labor under the impression that when this is done under proper circumstances, and the results are good, that it is; but that is a matter of opinion.

The question of the value of operation would depend on one or two things. First, the cases should be properly selected. Then, again, as Emmet points out, the necessity of getting rid of the cicatrix is a very important one.

But there is another question—I think, sir, that the prophylactic results, probable from repair of the cervix, depend on the small amount of cicatrix which remains. In some cases after laceration, it is difficult to find the line of union; in other cases, it is very easy to mark the border where union takes place. I apprehend it is the perfect union of those parts which would afford the greatest safeguard against the development of malignant disease.

I regret that my paper has not elicited a fuller expression from the gentlemen present of their observations on this subject.

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ASEPTIC CATGUT.

BY GEORGE RYERSON FOWLER, M.D.,
Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

Read before the Brooklyn Surgical Society, October 1, 1891.

In the opinion of many surgeons of the present day the use of chemical antiseptic agents, as a part of operative technique, should be avoided, and measures of asepsis substituted therefor, as far as possible. Perhaps, of all materials used in and about an operation the most difficult to sterilize, without the use of chemical germicides, is catgut. Even when these are employed, from the peculiar nature of the material to be sterilized and the presence of fat in its meshes, rendering its interstices almost impervious to watery solutions, one can never be certain that every portion has been subjected to the action of the germicidal agent. The unfortunate experience of Kocher, Volkmann, and others in losing patients from anthrax, the infection having its origin in the catgut employed, and which was supposed to have been obtained from the bodies of sheep dead of this disease, has led to considerable distrust of this widely-employed ligature and suture material.

I have always believed that some method would be brought forward for the perfect sterilization of this most valuable aid in operative work. About three years ago I began to have experiments made by Dr. Hodenpyl, of the Bacteriological Laboratory of the College of Physicians and Surgeons. I finally hit upon the method, which I have since employed with the greatest possible satisfaction, namely, that of boiling the gut for one hour, under pressure, in 97 % alcohol. Gut thus prepared, even though it be infected by anthrax itself, after such boiling becomes absolutely sterile, and repeated efforts to make cultures therefrom fail (see New York Medical Record, August, 1890, page 177). Alcohol under pressure can be heated to 200° F. by means of an ordinary water-bath, in a tightly-sealed fruit jar. In addition to the influence exerted by the alcohol and heat combined, it is probable that the element of pressure is to be taken into account in estimating the value of this method of sterilization.*

In order to maintain the gut in an aseptic condition after sterilization, I have designed the sealed bent tube herewith presented. The catgut is boiled in 97 % alcohol for one hour, and then cut in lengths. These are then placed in the bent tube, which is filled with 97 % alcohol, and the ends of the tubes hermetically sealed by fusing glass into the open ends, by the aid of the blow-pipe lamp; these tubes are then placed in an oven heated to 200° F. and there kept for one hour, after which sterilization is complete. In using, if the two legs of the bent tube are grasped and pulled apart the glass tube fractures at the point at which it is bent upon itself and the strands of catgut are withdrawn by means of a pair of thumb forceps. Only a limited number of strands are placed in each tube, for the reason that, as this method is employed for the purpose of insuring absolutely aseptic catgut, that which is left over at the end of the operation is either reserved for cases known to be septic, or thrown away.

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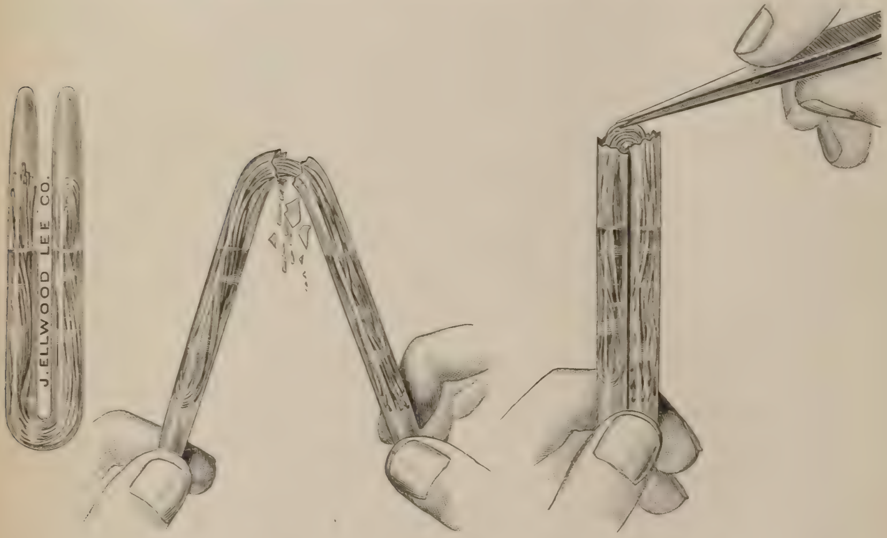
* I have found by computation that the pressure exerted upon each square inch of the interior of a fruit jar tightly sealed and heated to 200° F. in a water-bath is equal to about that of two atmospheres.

The following advantages are claimed for this method: 1. The catgut is rendered absolutely aseptic, after all handling in the preparation has ceased. 2. It is hermetically sealed by glass against all infection. 3. It is cut in suitable lengths for use. 4. The surgeon may resterilize the gut, if he desires, by placing it in an oven heated to 200° F. for one hour. 5. The quality of the gut is not impaired, but on the contrary it is rather improved by boiling alcohol.

In employing this method (boiling in alcohol under pressure) for the sterilization of catgut, I wish to warn against attempting to combine the same with the use of chemical germicide. The addition of any of the usually employed antiseptic or disinfectant agents to the alcohol, or the placing of the gut therein, either before or after boiling in alcohol, will surely result, as I have repeatedly proved by trial, in disintegration of the gut.


J. ELLWOOD LEE CO.

I am indebted to the J. Ellwood Lee Co., of Conshohocken, Penna., for carrying out my suggestions in perfecting the aseptic catgut ligature tube.*

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* At my request Drs. Meade Bolton and Slee made a careful bacteriological examination of the contents of these ligature tubes at the Hoagland Laboratory. After sterilizing by heat the portion of tube to be broken, the catgut strands were removed by means of a sterilized needle from the tube, and placed in culture tubes containing various media. Some of these tubes were placed in an incubator and kept at body heat, while others were exposed to ordinary room temperature. At the end of a week the catgut was found to be absolutely free from all forms of germ life. This confirms the observations made by Dr. Hodenpyl.

Those who desire to prepare their own catgut will find the following method available and valuable: The catgut is cut to lengths, folded and placed half a dozen strands or more in an ordinary four inch test tube. This is filled with 97 % alcohol to within half an inch of the top, and a wad of cotton pushed into the mouth of the tube, and over this a cork is so placed as to be upon a level with the edge of the tube where its lower end rests against the cotton. Thus prepared, the tubes are placed inverted, in a "lightning" fruit-jar filled with alcohol of a percentage not lower than 95 per cent., and the jar is then hermetically sealed and placed in a water-bath. This is heated to slow boiling and kept at this point for one hour. The jar must be allowed to cool before being opened. Upon removing the tubes containing the catgut, each one is to be carefully sealed over the cork by a layer of silicate of soda.

NEW YORK LEGISLATION ON MEDICAL AND HEALTH MATTERS IN 1891.

BY HENRY A. RILEY, A.B., LL.B., NEW YORK.

As the New York Legislature is now in session, it will be of interest to review the legislation on medical and health matters carried through at the last session.

Probably the law which was deemed of the most importance by physicians was that appropriating $454,850 for carrying out the provisions of the law passed in 1890, relative to the transfer of the insane poor from the different county poor-houses and institutions to the State asylums. This bill was persistently fought by a considerable number of persons who were directly or indirectly interested in a pecuniary way in perpetuating the old method, with all its horrors, but the humane sentiment of the State was sufficient to carry through the measure in a triumphant way. An enthusiastic public meeting was held in this city after the Governor signed the bill, which was addressed by many of the most prominent residents of the city and State. The bill apportioned 827 patients as follows:

Utica State Asylum,	150
Hudson River Asylum,	200
Middletown State Homœopathic Asylum,	200
Buffalo State Hospital,	150
Binghamton State Hospital,	127
	827

The amount appropriated was to be spent in the erection and equipment of new buildings.

Another important measure of special interest to New York City was the law making it mandatory upon the police commissioners to appoint certain station-houses where all women arrested should be taken, and requiring them to make such changes in the station-houses as would permit the keeping of men and women entirely separate and under control of a matron who should be under the direction of the officer in command. This law applied to New York and Brooklyn and the only exemption was the case of girls under sixteen, whose care is now legally assumed by certain institutions; when such persons were arrested they could be transferred to the institutions instead of the station houses where matrons were appointed.

This law has not been fairly administered by the police commissioners, who seem to have a prejudice against the employment of any women in an official capacity at the station-houses, and one or more societies interested in the welfare of the criminal classes have adopted resolutions protesting against the indifference of the police authorities. It is only within the last few days that the commissioners have shown a real desire to carry out the law, and as a result there are now a dozen station-houses with separate accommodations for women with matrons in charge.

When it is remembered that a woman may at any moment be arrested at the extreme upper part of the city, the disadvantage of requiring her to be taken, perhaps, a dozen miles before confinement is evident.

The College of Physicians and Surgeons of this city was authorized to transfer and convey all its property and assets to Columbia College; that institution having made a satisfactory agreement with the Trustees of the College of Physicians and Surgeons for the continuance of instruction. This transfer has been concluded, and the college is now a department of Columbia College.

A law was passed establishing a botanical garden in New York City, and authorizing the Commissioners of Public Parks to set aside 250 acres in Bronx Park for this purpose.

The objects to be secured, as stated by the law, are: "The establishment and maintenance of a botanical garden and museum, and arboretum, therein, for the collection and culture of plants, flowers, shrubs and trees; the advancement of botanical science and knowledge, and the prosecution of original researches therein, and in kindred subjects; for affording instruction in the same; for the prosecution and exhibition of ornamental and decorative horticulture and gardening, and for the entertainment, recreation and instruction of the people."

The scientific and educational part of the plan is placed in the hands of the president of Columbia College, the professors of botany, geology, and chemistry in that institution, the President of the Torrey Botanical Club, the President of the Board of Education and their successors. The business and financial affairs of the corporation are placed under a General Board of Managers, consisting of the persons just mentioned, the Mayor, the president of the Board of Commissioners of Public Parks, and at least nine other persons to be elected by the incorporators. When the Board of Managers shall have raised $250,000 by private subscription, then the tract of 250 acres in Bronx Park is to be set aside, and the Board of Estimate and Apportionment is authorized to issue bonds for the erection of suitable buildings, and the cultivation and decoration of the grounds. The sum of $500,000 is authorized to be raised by the sale of bonds, but this part of the law seems to be loosely drawn, as the following extract will show: "And the said Board of Commissioners is therefore duly authorized and directed to construct and equip within the said grounds so allotted, according to plans approved by them, and by said Board of Managers, a suitable fireproof building for such botanical museum and herbarium, with lecture-rooms and laboratories for instruction, together with other suitable buildings for the care and culture of tender or other plants, indigenous or exotic, at an aggregate cost not exceeding the annual interest upon the bonds hereinafter authorized to be issued by the city of New York."

As interest on $500,000 at three per cent. is only $15,000, it does not seem as if it was the intention of the Legislature that the total cost of all buildings in the garden should be only $15,000, unless it was contemplated that the $250,000 raised by private subscription was to be added to the building fund, and not used at all for the development and beautifying of the grounds.

The President of the Torrey Botanical Club, Judge Addison Brown, says that the words "the annual interest upon," are a clerical error and that a proper construction of the whole statute shows the intent of the Legislature to limit the cost of the buildings, etc., to the aggregate of the bonds, and not to the interest alone. It is not unlikely that the ambiguity will be removed by amendment at the present session of the Legislature.

The law establishing a Board of Medical Examiners, passed in 1890, was amended so as not to apply to any student duly matriculated in any legally incorporated medical college before June 5, 1890, provided a certificate setting forth such matriculation and signed by the secretary of the college, was filed with the secretary of the Board of Regents of the University of the State of New York within three months after the passage of the law.

The Legislature accepted the gift of the medical library of the Albany Medical College, and made it a part of the State library. The sum of $5,000 was appropriated to meet the expense of providing shelf-room for the books and for cataloguing them.

The Code of Civil Procedure was amended to provide as follows: "But a physician or surgeon may, upon a trial or examination, disclose any information as to the mental or physical condition of a patient who is deceased, which he acquired in attending such patient professionally, except confidential communications, and such facts as would tend to disgrace the memory of the patient, when the provisions of section 834 have been expressly waived on such trial or examination by the personal representatives of the deceased patient; or if the validity of the last will and testament of such deceased patient is in question by the executor or executors named in said will." Section 834, referred to, provides generally that no physician or surgeon shall disclose any information acquired professionally.

The Legislature established the Rochester State Hospital for the insane, and directed the payment of $50,000 to the Monroe County Insane Asylum upon the conveyance of its property to the new institution. A Board of Managers consisting of nine members was created with the same rights and duties as now belong to the managers of the Utica State Hospital.

The Board was authorized to appoint as Medical Superintendent a reputable physician who had had at least five years, active experience in a hospital for the insane, and assistant physicians not exceeding one for every 150 patients, including a woman physician as now provided by law.

A law was passed in 1888 to combine in one act all special laws affecting the Board of Health of Brooklyn, and providing among other things for the erection of a hospital for the reception and treatment of persons suffering from contagious diseases.

As this provision had caused great opposition on the part of persons residing in the localities suggested for such hospital, the Legislature passed a law directing the appointment of three commissioners to ascertain and appraise the amount of damage to property or interests by reason of the occupancy of said hospital by persons suffering from contagious diseases. The meetings of the commissioners were to be public, and their reports were to be confirmed by the Supreme Court.

A general revision of the Charter of the City of Buffalo was made, and new regulations passed for the Board of Health of that city. The Board was to consist of the Mayor, the president of the Board of Public Works and the Health Commissioner.

The latter was to be a reputable and licensed physician of not less than thirty years of age, and who had had an active experience as a practicing physician of not less than five years.

The Board was to have supervision of burials, vital statistics and matters of public health. The city was divided into eight health districts, and a physician in good standing appointed for each district, and of the eight, two should be from the homœopathic school.

The usual duties of health boards in regard to epidemics, nuisances, etc. were detailed and violations of ordinances were declared to be misdemeanors.

The interest of the city of New York in the block between Forty-ninth and Fiftieth Streets and Fourth and Lexington Avenues was released to the Woman's Hospital on the condition that the managers provide and maintain twenty-four free beds for poor persons residing in the city of New York. Admission was to be obtained according to ordinances passed by the Common Council, or in default of such ordinances, nomination be made by the Mayor.

The Legislature authorized the name of the asylum for idiots to be changed to the "Syracuse State Institution for Feeble-minded Children," and bequests and devises to the St. Mary's Female Hospital of Brooklyn were declared to be legally the property of St. Mary's Maternity and Infants' Home, its successor.

The safety of workmen employed on scaffolds was provided for by requiring all scaffolds used more than twenty feet from the ground to have a safety-rail along the outside and across each end, and raised at least thirty-four inches from the floor.

The usual large appropriations were made for the maintenance of the State hospitals and institutions, and in addition appropriations were made in a number of instances for new buildings, etc. Among these were the following: for the St. Lawrence State Hospital, for completion of cottages, general supervision, etc., $374,000; State Asylum for Criminal Insane, at Matteawan, for general repairs $76,461.33; Middletown State Homœopathic Hospital, for general repairs, $29,500; Willard State Hospital, for general repairs, farm, etc., $37,700; State Custodial Asylum for Feeble-minded Women, for erecting and furnishing cottages, $16,000.

HISTORY OF COUNTY FARM.

BY HOMER L. BARTLETT, M.D.

In the year A.D. 1824, an act was passed by the Legislature of the State of New York, empowering the supervisors of the various counties of the State to purchase land, not to exceed 200 acres—nor to cost more than seven thousand (7,000) dollars—whereon to erect a county poor-house. The same act, also, provided that the various boards of supervisors should elect, at their annual meeting, three persons who should be designated "*Superintendents of the Poor*," to carry out the provisions of the act, and have the care of the indigent poor. It was not, however, till 1829 or '30 that this act took practical shape in Kings County. Then it was, that the board of supervisors appointed Samuel Smith, David Johnson, and Michael Schoonmaker, and they constituted the first Board of Superintendents of the Poor of the County of Kings. Soon after, they purchased the present county farm from the Martense estate, consisting of sixty-four (64) acres, for the sum of three thousand (3,000) dollars, and proceeded to erect a building thereon, which should serve at once, as poor-house, penitentiary, hospital, and nursery for children. Into this building the county charges were removed by farm wagons in April, 1832, Thomas Baisley and wife going with them as keepers, a position they had filled for three years previously in the old Brooklyn Poor-house. It is not known how many county wards there were at that time, but probably less than fifty. Now they have increased to many thousands. In 1850 there were treated in the Kings County Hospital, alone, 1,426 patients; in 1860, 1,596; in 1870, 4,059; 1880, 2,845; in 1890 4,399.

The present hospital building was erected in 1837; the first, or "old" Lunatic Asylum in 1844; the "new" Lunatic Asylum in 1850–5; the nursery—now Asylum for Incurables—in 1850; the old Penitentiary—afterwards the Truants' Home—in 1846,—the present Penitentiary in 1850–3.

FRIEDRICH ANTON MESMER.

Under the terms mesmerism, animal magnetism, electro-biology, clairvoyance, odylic or odic force, and hypnotism, we have heard much of that peculiar nervous condition in which the body and mind of an individual are supposed to be influenced by a mysterious force emanating from another person

While not a few, especially in modern days, have investigated the phenomena in a scientific spirit, more has been done by quacks and charlatans to throw discredit upon the whole subject. One of the greatest of these charlatans was FREDERICK (or Frenz) ANTON MESMER. This man did not originate a single idea. He only treated on the old day-dreams and vagaries of departed ages ; and yet he managed to fix his name upon a science (?) in the origination of which he had no part whatever, for we know that it was known among the Chaldeans, the Babylonians, the Persians, the Hindoos, the Egyptians, the Greeks and Romans in all ages, and that many of their priests effected cures or threw people into deep sleeps in the shades of the temples, during which the sleeper sometimes had prophetic dreams, and that they otherwise produced effects like those now referred to hypnotism.

The most notable forerunner of Mesmer was Valentine Greatrakes, who in Charles II. reign performed such marvelous cures in England and Ireland by the "stroking of the hands," and to whom thousands flocked from distant parts of the country. Greatrakes theory of disease was the scriptural one : The morbific power was a devil which had to be expelled from the body in which it had taken shelter. Mesmer was born in Wiel, near Lake Constance, in 1733. He studied medicine in Vienna, took his degree and commenced practice.

He became interested in astrology and imagined that the stars exerted an influence on beings living on the earth, and published his first work, *De Planetarum Influxu*, in 1766. He removed to Paris in 1778, and in a short time the French capitol was thrown into a state of great excitement by the marvellous effects of mesmerism. The medical faculty stigmatized him as a charlatan, but still the people flocked to him, and in one year he is said to have received 400,000 francs in fees, and the French government offered him an annual stipend of 20,000 francs if he would reveal his secret and stay in France.

He had his consulting rooms dimly lighted and hung with mirrors ; strains of soft music occasionally broke the profound silence ; odors were wafted through the room, and the patients sat round a kind of vat in which various chemical ingredients were concocted or simmering over a fire. Holding each others hands, or joined by cords, the patients sat in expectancy, and then Mesmer, clad in the robes of a magician, glided amongst them, affecting this one by a touch, another by a look, and making "passes" with his hand toward a third. The effects were various, but all were held to be salutary.

As his prosperity and reputation increased, so did his audacity—he ordered his patients to bathe in river water, because that was magnetized by being exposed to the sun's rays, and he, himself, had magnetized the sun some twenty years before.

A gentleman was attacked with pneumonia and Mesmer was sent for. He felt his patient's pulse, made certain inquiries, and then turned to the patient's wife and gravely assured her that the only way to restore her husband to health was to lay in his bed by his side, one of three things—"a young woman of brown complexion, a black hen, or an old bottle." The bottle was tried, but the gentleman grew so much worse that the alarmed and anxious wife left the room, and during her absence Mesmer bled and blistered his patient, which treatment proving more efficacious, the man recovered and gratefully gave Mesmer a written certificate that he had been cured by mesmerism.

After a time though mesmerism fell into disrepute. Mesmer retired from Paris and died in obscurity at Meersburgh in Switzerland, in 1815.

Recently physiologists and physicians have set about investigating the subject in such a manner as to bring it into the domain of exact science, and to dispel the idea that the phenomena are due either to any occult force or to supernatural agency.

J. H. H.

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EDITORIAL.

DANIEL AYRES, M.D., LL.D.

In the death of Dr. Ayres, the medical profession of Brooklyn has sustained a great loss. Had it occurred ten years ago it would have been irreparable. Failing health had compelled the doctor to withdraw from active practice, and the profession has, therefore, been gradually prepared for the severe blow which it has received.

Dr. Ayres received his college education and degree of A.B. at Princeton, and in 1843 was graduated in medicine from the Medical Department of New York University. After a term of service in Bellevue Hospital, he removed to Brooklyn in 1845. He was a founder of the Brooklyn City Hospital, now the Brooklyn Hospital, and a member of the visiting staff from 1846 to 1853. He rendered valuable service in the organization of the Long Island College Hospital, and was a member of its faculty for many years. During the Civil War he was Medical Director in the service. In 1870, he became Consulting Surgeon to St. Peter's Hospital. The degree of LL.D. was conferred upon him by Wesleyan University. To this institution he gave $275,000, to be used in the advancement of biological science. To the Hoagland Laboratory he gave $10,500 for the advancement of medical science.

No man ever lived in this city who has done more for its scientific interests, not in gifts of money alone, but in personal labor and influence, than Dr. Ayres, and his memory should be kept fresh and green by all true lovers of science.

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DR. EDWIN COLT; SIXTY YEARS IN THE PRACTICE OF MEDICINE.

The complimentary dinner which is to be given to Dr. Edwin Colt on the completion of sixty years spent in the practice of medicine, is the expression by many friends of a sentiment which must exist in the heart of every physician of congratulation towards a colleague, who through a period covering more than half a century, has ministered to the sick and poor of this great city. When one recalls the dangers which encompass the physician's life from contagion, from exposure, and from overwork, it is a marvel that a human being can be endowed with sufficient vitality to escape them through a score of years; but when the active life lacks but a decade of the full measure of the Psalmist—a life from the cradle to the grave—it is little short of a miracle. We sincerely hope that the response to the committee's invitation, which is extended to the entire profession, will be so general as to show a hearty sympathy in a movement which we know must appeal to every one in its ranks. Those who desire tickets can procure them from Dr. Reuben Jeffery, 87 South Ninth Street.

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MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The Eighty-sixth Annual Meeting of the State Society was held in Albany, February 2, 3 and 4. The attendance was excellent and the papers both interesting and instructive.

For the first time in many years Kings County is honored with the presidency. The delegates and permanent members of the Medical Society of the County of Kings, at a meeting held in Brooklyn, unanimously endorsed the nomination of Dr. Lewis S. Pilcher as President of the State Society, and Dr. Wm. Maddren as a member of the Nominating Committee. These nominations were again endorsed at a meeting of the delegates of New York and Kings Counties, and the State Society set its final seal of approbation on the nominations by the election of the nominees. We heartily congratulate President Pilcher and wish for him a most successful administration.

As the terms of office of two of the members of the State Board of Medical Examiners expired with the year, it became necessary to nominate new members to fill the vacancies. Drs. Eugene Beach, of Gloversville, and Creveling, of Auburn, whose terms had expired, were re-nominated, and besides these gentlemen two others, Drs. B. F. Sherman, of Ogdensburg, and A. Walter Suiter, of Herkimer. From these four the Board of Regents will select two.

SECRETARY OF PUBLIC HEALTH.

Repeated efforts have been made in past years to organize a Department of Public Health in the National Government, and place it on the same footing as the other departments, with its chief or secretary, who would be a member of the President's Cabinet. The American Medical Association has taken the matter in hand and has sent broadcast throughout the land a petition to Congress which it asks the profession to endorse, and exert itself to have granted. Among the many advantages which would accrue from the establishment of such a department, the committee of the association believes that its secretary would "become one to whom we could look for the exploitation of measures that will direct continuous scientific and collective investigation in regard to endemic, contagious, and other diseases ; the enlightenment of the people in sanitary ways of living ; the dissemination of information respecting the most favorable places of residence for those afflicted with such chronic diseases as asthma, rheumatism, neuralgia, and consumption ; the examination of food and drinks ; medicinal springs ; the collection and tabulation of vital statistics at large and in various localities, such as the congested areas of our great cities and among various races. He would be able to coöperate with State Boards of Health, the Signal Service, the medical departments of the army, navy, and marine service, unify and utilize their work, and thus make the Department of Public Health the repository of the most important facts that concern the comfort of the people ; and his duties will grow broader and stronger in adaptability to public needs."

The measure is one which will doubtless receive the cordial endorsement of every medical man in the country. Much may be accomplished by the individual efforts of physicians in commending the subject to Congressmen and Senators with whom they may be acquainted or come in contact.

HAHNEMANN AND MESMER.

The history of medicine would be incomplete without mention of some of those who have introduced novel theories and built upon these theories sects or exclusive schools of medicine.

It is on this account that we, this month, produce portraits of Hahnemann and Mesmer, the one the father of a school of medicine which has occupied a prominent place in the history of modern medicine, and the other a character who succeeded in fixing his name upon a physiological or therapeutic law which is now being revived and scientifically studied, while Hahnemannic homœopathy is dying out.

HEARTLESS DOCTOR.

Such is the epithet applied by the newspapers to Dr. Craigen, of Allegany County, Md., who is said to have removed the stitches from the leg of a patient because he would not pay the doctor $2 for having put them in. The facts are alleged to be that a wounded man had been taken by his friends to the office of Dr. Craigen, and that he, after dressing the wound, put several stitches in it, and then demanded $2 as his pay; that the friends of the patient were surprised, supposing that, as he was the county physician, there would be no charge; that the doctor told them if they did not pay him he would undo his work; that the men insisted they were penniless, and that the doctor thereupon, with the remark that he didn't intend to do that kind of work for nothing, deliberately cut the stitches.

It is reported that the Pension Office forwarded a letter to Dr. Craigen, dismissing him from the place he had held as secretary of the Board of Pension Examining Physicians at Cumberland. Almost simultaneously with the action of the pension authorities in Washington, the authorities of Allegany County, Md., dismissed Dr. Craigen from the several public offices he had held, and the State Medical Association expelled him from membership.

Dr. Craigen has been endeavoring to induce the Pension Bureau to rescind the order of dismissal and to reinstate him in office. He does not deny, but, on the contrary, admits that he cut the stitches as alleged. He defends his action by asserting that the wounded man had plenty of money in his pockets and was abundantly able to pay for the professional services he received.

While the action of the doctor in the light of the statements made seems heartless, still there is probably some fact which has not yet been stated which would put the matter in a different aspect. There are in every community individuals who regard a doctor's services to be at the disposal of the community whenever they choose to call for them, and who consider the bill for such services the last to be paid, if, indeed, they ever expect to pay it at all. It is more than probable that the patient in the case of Dr. Craigen was one of this class.

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OBITUARY.

FRANK W. FLEISCHHAUER, M.D.

The subject of this memorial sketch was cut off so early in his professional career that his obituary could rather be a prophetic account of what his life promised than an eulogistic record of what he had achieved as our co-worker in the medical field. On Sunday November 22, 1891, at his residence, 159 Bergen Street, Frank William Fleischhauer died of acute cerebral meningitis and cerebellar abscess, following median otitis, at the age of twenty-eight years and one month. His early education was received at the city of his birthplace, Cologne, Prussia, at the gymnasium, and was continued at the College of Pharmacy, of Philadelphia, to which city his father's family came in 1876. He early engaged in the retail drug trade in that city and continued to follow it after his removal to Brooklyn in 1882. He rose rapidly in pharmacy after his registration by the Board of Pharmacy of the county, as the result of his examination before that Board, and when but twenty-two years of age, assumed the propietorship of a drug store on Smith Street. In 1886 he began the study of medicine, graduating at the Long Island College Hospital in 1889, and immediately began the practice of his profession at the location given above as the place of his death, severing his interests with his first avocation upon graduating in medicine. In the short two-and-a-half years that Dr. Fleischhauer was permitted to engage in the work of his choice, he became deeply beloved and wonderfully confided in by a surprisingly large number of those who had retained him as their medical adviser, especially of his own nationality, and had won much respect and esteem from such of us as knew him personally, by the faithful and untiring devotion manifested in his daily work.

The doctor early associated himself with the Medical Society of the County of Kings, and retained his membership in the Kings County Pharmaceutical Society.

On Oct. 31, 1890, he married Miss Frances Imhoff, one child, a son, resulting from this union. To his bereaved widow, aged father and beloved brother, we extend our heartfelt sympathy and condolence.

W. M. HUTCHINSON,
C. EUGENE GUNTHER, } *Committee.*
LOUIS M. DUSSELDORF,

PROCEEDINGS OF SOCIETIES.

BROOKLYN PATHOLOGICAL SOCIETY.

The 333d regular meeting and annual business meeting of the Brooklyn Pathological Society was held Thursday evening, Jan. 14, 1892, at the society's rooms in the Kings County Society building, 356 Bridge Street.

The Treasurer's report showed a balance of $152 in the treasury.

The Secretary reported the society to be in an active, prosperous condition, with a membership of ninety-six members in good standing, nine members having been added during the year, one lost by death, and one lost by resignation.

At the beginning of the fall meetings a circular giving a synopsis of a systematic study of Pathology was sent out to every regular physician in Brooklyn, and published in the BROOKLYN MEDICAL JOURNAL.

This circular had the desired effect of increasing the attendance upon the meetings, and creating a greater interest in the work.

Very interesting and instructive papers have been read upon Pathology of the Digestive System, Pathology of the Nervous System, and upon Tumors, by Doctors Van Cott, Minard, Shaw and Fearn, followed by spirited discussion, and illustrated by an abundance of pathological material from Hoagland Laboratory, Seney Hospital, St. Catharine's Hospital, and private collections. Besides this there have been presented during the year fifty-three specimens from autopsies and operations, together with their respective histories, by the following-named doctors: Wackerhagen, Criado, Carley, Rappold, Hoople, Wilson, McManus, Shoop, Maddren, Van Cott, Slee, Coffin, Belcher, Sommers, and Brundage.

One of the most interesting specimens being the lithopædion discovered by Dr. Wilson upon the autopsy table at St. Catharine's Hospital, the report of which appeared in the BROOKLYN MEDICAL JOURNAL.

The society has recently had put in upon the same floor in which the meetings are held, a basin supplied with running water and antiseptic lotions, so that members may handle specimens without fear of carrying sepsis to their patients.

The society also owns a good Bausch & Lomb microscope.

After the report of the Secretary, the following names were balloted upon and declared elected to hold office for the ensuing year: For *President*, Joshua M. Van Cott, Jr.; *Vice-President*, W. N. Belcher; *Treasurer*, May R. Owen; *Secretary*, Frederic J. Shoop.

The dues for coming year were then fixed by vote at one dollar.

Dr. A. H. Brundage, whose name was proposed at the previous meeting, was elected to membership. After the transaction of a few minor points of business, the society adjourned.

FREDERIC J. SHOOP, M.D.
Secretary.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

MANUAL OF CHILD-BED NURSING. By Charles Jewett, A.M., M.D., Professor of Obstetrics and Diseases of Children at the Long Island College Hospital. New York: E. R. Pelton, 1891. Pp. 40. Price 50 cents.

To the scientific man, to the business man, or to the practitioner, knowledge of practical working details means success. In obstetric practice this is especially true.

To the busy physician, elaborate verbal directions concerning treatment are expensive of time, and quickly forgotten by the patient. The day must come when all thorough men will have printed directions to hand to patients, as for the diet of the dyspeptic, and diabetic, and young child, and for the nurse during the puerperium.

We do not know where else to turn for a book which, in its own field, so well meets the two requirements of practical detail and clear instruction. Originally intended for nurses, it has a high value for every practitioner. To the writer it is indispensable. When the pregnant patient asks him what is to be gotten ready for her confinement, or how the newer models of baby clothes are to be made, he loans her a copy to study. When a strange nurse wants to know twenty items concerning his methods of post-partum treatment, she is referred to it, and can be held responsible if ophthalmia, or a septic navel, or the like, occur without warning the doctor. Here are details of diet for mother and child, of treatment for many emergencies—including delivery in the physician's absence—of antisepsis, of the care of breasts, bladder, bowels, of bathing, *and* all the rest. It seems to us to lack only the danger-signals for placenta prævia, and for uræmic convulsions, and the hot-water treatment for post-partum hæmorrhage.

It is terse, systematic and lucid. Our chief desire in reaching its end is that of Oliver Twist. R. L. DICKINSON.

A PRACTICAL TREATISE ON THE DISEASES OF WOMEN. By T. Gaillard Thomas, M.D., LL.D. Professor Emeritus of Diseases of Women in the College of Physicians and Surgeons, New York, etc. Sixth edition, thoroughly revised by Paul F. Mundé, M.D., Professor of Gynæcology at the New York Polyclinic and at Dartmouth College, etc. Containing 347 engravings on wood. Phila.: Lea Brothers & Co., 1891. Pp. 15–17 to 826. Price, $5.00.

Probably no treatise ever written by an American author on a medical topic has been accepted by more practitioners, as a standard text-book, or read with pleasure and profit by more medical students, than Thomas on the diseases of women.

Naturally the knowledge, that after a period of ten years, another (the sixth) edition was announced to appear a wide-spread desire should be manifested by the medical profession in general, or gynæcologists in particular, as to his present views.

Possibly there will arise a feeling of disappointment with some that the work of revision has been entrusted to another, and that a fear, or at least uncertainty, should prevail as to whether the unity of the work would be impaired by an expression of opinion dissimilar to that held by the author.

It is believed careful perusal will, in the main, dissipate any such apprehension.

In the preface, Dr. Mundé modestly refers to this embarrassment. Certainly Dr. Thomas is to be congratulated that the work was entrusted to one so admirably fitted for the task. Wherein Dr. Mundé has differed from the author he has frankly stated his own opinion.

To bring a work of such magnitude up to the present status, must of necessity, involve a change in the text and a great amount of work.

The sketch on gynæcology is only changed so as to bring it up to date, proper credit being given to McDowell, Sims, Hodge, and Emmet as American gynæcologists.

The chapter on ætiology is comprehensive, practical, and valuable. Those sections relative to neglect of exercise and physical development, excessive development of the nervous system and non-recognition of injuries due to parturition are particularly suggestive. In chapter III., general considerations upon uterine pathology and treatment, the varying views of different authors are considered, but the theories of none fully accepted.

However, the belief expressed is that, in order of frequency and importance the primary pathological conditions which "constitute the especial factor of uterine diseases" are:

1. Catarrhal inflammation of the lining membrane.
2. Prolonged congestion of uterine tissues.
3. Excessive growth of connective or muscular tissue. The detail of individual agencies at work to produce these several conditions is concise, and will doubtless meet the approbation of most gynæcologists.

In this category he ascribes due prominence to laceration of the cervix as productive both of disease of the cervix and body, a fact as yet entirely ignored by some foreign authorities—notably English.

Under the head of therapeutic resources the important question of septic infection receives due consideration. While admitting the possible risk of poisonous germicides, the authors are not content with simple aseptic precautions. after *scrupulous cleanliness* comes *thorough disinfection* of the hands of the operator. The sterilization of instruments is that of very hot carbolized water (no mention being made of the superlative value of dry heat, which appears to be a serious oversight). The daily sterilization of instruments for daily use is recommended and its necessity enforced.

No topic of this subject is of greater importance than the manner of controlling high temperatures after operation, and in certain pathological states. Recognizing the fact that a temperature of two degrees above the normal should be inquired into and that a rise to 103° is rapidly exhausting to the vital forces, he recommends the use of the coal-tar compounds, at the same time properly guarding the heart by strophanthus and caffeine.

It gives but passing allusion to and insufficient approval of ice water coil or ice bags to the abdomen in cases of pelvic inflammation.

In this particular they indicate, and that imperfectly, the superlative value of the abdominal (omitting to mention the head) coil not only in pelvic inflammation, but in conditions of hyperpyrexia from whatever cause, be it septic or otherwise.

True, its proper and persistent use, perhaps for days, under these conditions, which are of imminent peril to the patient, requires the most watchful attention, not only of the attendant, but by competent and specially trained nurses as to every detail. No other safe resource at once so efficient, yet harmless, has as yet been devised, and it seems unfortunate that more specific statement was omitted.

The chapter on "Means of Diagnosis" is replete with sound advice and valuable suggestions.

There is, however, a pronounced difference of opinion by the author and the reviser on the subject of tents. Thomas stating they are never to be used, preferring to trust to rapid dilatation under all circumstances, while Mundé would approve their use under limitations. Doubtless rapid dilatation under proper aseptic precautions is the rational and far safer method. Certainly modern experience amply demonstrates that the principal factor of danger in rapid dilatation is not from traumatism, but from avoidable sepsis.

Chapter VIII. on electricity as a therapeutic agent, gives the result of Mundé's experience for twenty years. He recommends it in a great variety of conditions.

As a rule, in chronic inflammation, lymphadenitis, and obstructive dysmenorrhœa, a few applications will neither benefit nor injure, but for its salutary effects weeks or months are required. He is not enthusiastic over Apostoli's treatment of uterine fibroids, and is skeptical as to its permanent efficacy, though this agent holds a higher place in his confidence than is accredited to it by most observers.

Perineorrhaphy and injuries to the pelvic floor are discussed at length.

Question is raised as to the efficacy of Emmet's new operation, but on hardly sufficient grounds.

A very understandable description is given of Tait's operation both for complete and imcomplete rupture, with illustration as to the method of the operation and the exact manner of introducing the sutures. Preference is given to this operation.

The treatment of the subject of inversion of the uterus is comprehensive and the conclusions will commend themselves to the surgeon.

This work gives due prominence to the subject of uterine fibroids. The discussion is clear and logical and the recommendations conservative and practical as justly would be expected from gentlemen of extensive experience and progressive views.

The reasons for and against Hégar's operation and that of myomotomy are clearly stated, are safe guides for practice, and will receive the cordial assent of all but extremists and those who care more for self-glorification than the welfare and safety of those who unfortunately seek their advice.

Dr. Mundé gives proper emphasis to the fact that undue importance is frequently accorded to these benign growths to the cruel and needless discomfort of the possessor.

The topic of predisposing causes in cervical and uterine cancer is discussed in a masterly manner. As regards the former, the language is positive and the inference unquestionable. The very highest value, though, attaches to the statement made by Dr. Mundé, and confirmed by Heitzman, that poorly-developed embryological cells were, in one of his cases, the seat of malignant development.

The "Disorders of Menstruation" (so frequently met with) is treated in a very satisfactory manner both as regards diagnosis and methods of treatment and is so conclusive and logical in its deductions as to leave little, if anything, to be desired.

The discussion of disease of the ovaries and treatment, including ovariotomy and oöphorectomy, presents the latest and best views on these important and engrossing subjects—a centre about which the fire of discussion and the reputation of the adventurer has lingered and lingers yet.

It is believed no better rules for discriminating diagnosis or judicious management have ever been formulated by American or European authorities. This topic includes five chapters, being 115 pages, and the interest is so uniform and sustained as to make special comment appear almost presumptuous.

Finally, without even alluding to many matters of the highest interest, as too extensive for the limits of this review, the subject of "Diseases of the Fallopian Tubes" and the topic of "Laparotomy" demand and have received due consideration.

It is refreshing to notice in this connection, notwithstanding, the dogmatic iteration and *reiteration* of some who claim to speak with high authority. These authors recognize other pathological causes for pus formation in cellular pelvic structures than virulent escape from diseased tubes, and that conditions associated with puerperal septicæmia give rise to infection through the lymphatics leading from the endometrium and uterine sinuses.

It is safe to assume that Dr. Thomas has maintained in the new edition of his work the high reputation accorded him by home and foreign critics.

Next to the indescribable charm of listening to Dr. Thomas' lectures and clinics, which have in them the element of a captivating and inspiring personality—which must be heard and felt to be properly appreciated—is this volume, which in classic excellence, elegance of diction, and scholarly and scientific statement must remain what it long has been, a standard text-book both for practitioner and student, at home and abroad, and an enduring pride to Amercan gynæcologists.

In a field by no means new or wanting in honorable achievement, Dr. Mundé has added to his already enviable reputation by the manner in which he has acquitted himself in an undertaking at once so delicate and difficult and for which he will receive, at the hands of the profession, their acknowledgement.

W. B. CHASE.

MINOR SURGERY AND BANDAGING, INCLUDING THE TREATMENT OF FRACTURES AND DISLOCATIONS, TRACHEOTOMY, INTUBATION OF THE LARYNX, LIGATION OF ARTERIES AND AMPUTATIONS. By Henry R. Wharton, M.D. Philadelphia: Lea Bros. & Co., 1891. Price, $3.00.

This book is designed to present in a concise manner a description of the various minor surgical procedures, surgical dressings and methods of bandaging employed at the present day. The article upon bandaging is profusely illustrated, most of the cuts being entirely new and many taken from photographs. These latter are especially valuable, for the mere description of any especial form of bandage, however carefully written, will scarcely suffice to render clear the exact meaning intended to be conveyed by the writer. Only the most important and commonly used bandages are treated upon, the author believing that it is far better to become perfectly familiar with say one bandage for each part, than to have but a superficial knowledge of several methods. If the student will but place these illustrations before him and, following the text, couched as it is in simple and concise language, he will have no difficulty, particularly if he utilizes a fellow-student as a model, in soon familiarizing himself with nearly all that is necessary to learn in this branch of our art. The first one hundred pages of the book are devoted to this subject, and if the author had ended his book at this point, he would even at this, have presented an exceedingly useful monograph to the profession.

Part II. relates to minor surgery, and opens with a short dissertation upon the theory of asepsis and antisepsis in wound treatment, and an exceedingly brief description of the dressings and methods employed, and the manner of conducting aseptic operations. The advantages of cleansing the region of the proposed operation-wound are fully recognized; exception might, however, be taken to the statement that, in private practice, this must necessarily be left until just before the operation is undertaken. As a matter of fact, the shaving and disinfection of the parts, and the application thereto of boro-salicylic solution compress, covered by oiled silk, several hours prior to the operation, by a nurse or assistant, will be of the greatest value, both in saving the surgeon's time as well as in maintaining a nearer approach to the normal condition of the structures to be operated upon, in that irritation resulting from circulatory disturbances due to the scrubbing brush ; subsequently a simple rinsing away of the loosened epithelium being all that is required at this time.

The uses to which plasters are applied in surgical dressings are set forth in an intelligent and practical manner. This, together with a description of methods of preparing poultices, carrying out irrigation and the application of counter-irritation, form a valuable chapter. The space devoted to transfusion of blood is entirely wasted, inasmuch as this operation is now abandoned for the simpler and quite as efficient method of saline infusion, which is likewise described.

The chapters on the use of catheters and bougies, application of sutures and ligatures, anæsthetics, trusses, management of hæmorrhage, the treatment of fractures and dislocations, and ligation of arteries and amputations present to us many old and tried friends, the generally-accepted authorities being followed upon these subjects.

The make-up of the book is well up to the mark of excellence usually followed by the publishers. G. R. FOWLER.

W. B. Saunders, publisher, announces that the following books are now in preparation and will be ready for delivery about June 1:

AN AMERICAN TEXT-BOOK OF SURGERY. By Professors Keen, White, Burnett, Conner, Dennis, Park, Nancrede, Pilcher, Senn, Shepherd, Stimson, Thomson, and Warren. Forming one handsome royal octavo volume of about 1,200 pages (10 x 7 inches), profusely illustrated with wood-cuts in text, and chromo-lithographic plates. Many of them engraved from original photographs and drawings, furnished by the authors. Price, cloth, $7.00 ; sheep, $8.00.

AN AMERICAN TEXT-BOOK OF THE THEORY AND PRACTICE OF MEDICINE, ACCORDING TO AMERICAN TEACHERS. Edited by William Pepper, M.D., LD.D., Provost of the University of Pennsylvania. To be completed in two handsome royal octavo volumes of about 1,000 pages each, with illustrations to elucidate the text where-ever necessary. Price per volume, cloth, $5.00 ; sheep, $6.00 ; half Russia, $7.00.

MISCELLANEOUS.

DANIEL AYRES, M.D., LL.D.

At a meeting of the faculty of the Long Island College Hospital, held January 23, 1892, Prof. A. J. C. Skene, Dean, presented the following minute, which was ordered spread on the records:

Dr. Daniel Ayres, one of the founders of the Long Island College Hospital, one of its professors in its early days, and for a long time Emeritus Professor of Surgery, a man who deserves of this institution and its faculty the highest praise, has gone from this to a higher and better sphere.

In this age and in this country, where the so-called lower classes are raised to or above the average plane of mankind in every respect that goes to make true greatness, we are apt to lose sight of the heroes ; one of such was our deceased colleague, who, not only as a member of the medical profession, but as a citizen, stood head and shoulders above the average man.

He was fortunate in every particular, a child of intellectual and cultured parents, who were so circumstanced that they could give him every advantage, and from whom he inherited a magnificent body, capable of carrying and sustaining the immense brain which he possessed. This was cultivated to the highest degree by study, both in this country and the various cities of Europe. Everything contributed to make him the great man he was, so completely equipped for his life work in the profession of medicine when he settled in our city.

So markedly was this the case, that when he had been here but a short time, while yet he might be called a boy, so young was he in the profession, he attracted the attention, not only of the citizens of Brooklyn, but also of the country beyond, to his remarkable culture and ability. His active practice in the city was characterized by great success. He had all the advantages, not only of learning and culture, but his personal appearance and magnetism were such as to invite attention everywhere. Every one in later years was attracted by his snow-white hair and rosy cheeks, and his magnificent physique, and all stopped to look at him as he passed, whether they knew him or not. When he gained the attention, whether of patient or neighbor, he had the ability to hold it, so great was the confidence which he inspired. His whole life in the practice of medicine was one of admiration, esteem and confidence on the part of his associates and neighbors. As a teacher, he was extraordinary, far above the average. It was largely due to his clear insight into the necessities of the city and the profession of the city, that he, with others, founded this institution, which has become so well known, and whose methods of instruction have been so largely imitated of late years by many other institutions. He was one of the moving spirits in establishing the system of education as here carried out. More than that, he took a very active part in carrying out this system. As a lecturer he was superior. As a teacher he may have overreached the students because he had gone so far in the study of the science and the art of medicine that he sometimes bewildered even graduates by his learning and profound thought, but he never failed to interest, and if he did not convey facts that were so useful in every day practice, he did better, he established a thirst for knowledge. He was himself in love with science, and he invited others to join in this enthusiasm and devotion, and he did more towards stimulating the young, and old ones too, to think and to labor, than any other one man in our profession. In this he was preëminent.

There are many who are perfectly willing to exercise their brains and bodies when they must; there are many who labor hard in medicine because they cannot help it; there are not very many who wrestle with the science of medicine purely for the love of it. This he did thoroughly. Nor did that love of science and the love of study wane when he grew older. Long after he had gained all the reputation he could, all that he required, in fact, to satisfy the most ambitious; long after he had obtained all the wealth that was necessary, he continued his labors as zealously as ever. No man ever lectured, no man ever studied with more enthusiasm than did he up to the very end of his life. Every time one met him to talk with him a moment, one would find that he had mapped out some new line of investigation which he was pursuing with all the energy of youth; indeed, with far more energy than the average youth manifests, an enthusiasm that was extraordinary. His grasp of science was immense, wonderful, bewildering sometimes; in fact, so daring was he in his investigations, that he not infrequently announced certain doctrines or facts with reference to science that made the older and more conservative shrink from following, afraid that he was drifting out on a sea of speculation, where he would be wrecked, and they dared not trust themselves to follow or go with him. He was fearless, because he knew that there was no danger of passing the boundary line of human knowledge. He astonished and sometimes rendered other men timid on that subject, and to-day we are inclined to say we did not quite understand him, and were afraid he was trying to break down the barriers that shut us out from the other shore; not only afraid he was trying to push his investigations beyond the boundary line of human knowledge, but beyond that which is given to us here to know. If at any period of his earlier professional life he appeared too regardless of the opinions of the authorities in science and ethics, in the more mature light of advanced years he seemed to turn back and join those in the front rank of investigation. He contributed in this way greatly to the expansion of science, furthering all its interests and increasing all its treasures, and in every way was a great blessing to the community and to the profession; always able to aid one who was below him in years; always able, willing and ready to aid him with counsel when in need.

He knew that it took men of brains, and money as well, to further education in this country as well as in every other, and so he made magnificent donations to institutions of education. To the Wesleyan College $275,000, for the purpose of aiding in the investigation of those branches of science which he had so enjoyed in his own lifetime, and which he knew was of so much value to the human race; $10,000, and more, he gave to the Hoagland Laboratory, so that the work which he saw done there, part of which work he had done himself, and under unfavorable circumstances, might be carried on with greater facility. A great deal of his laboratory work was done in his own rooms, in his own dwelling house, and when he saw the advantages this laboratory was going to be to students, he at once came forward and not only aided it by wise counsel, but gave liberally of his abundance. And, perhaps, I can say with safety, that to no man in this age is the medical profession of Brooklyn more indebted than to Dr. Ayres, in every way which is useful and beneficial.

All men who knew him, both in the profession and out of it, feel that the best that can be said of him would not be a worthy tribute to this very great man: a man who towered above his fellows, mentally as well as physically. In looking back over his life, we know of no man in the profession whose example is more worthy of being accepted as a model, than his. Every one in the profession who ever rubbed shoulders with him, gained inspiration from him. His enthusiasm was contagious; his love of science, for the sake of science, was great. He had everything in his favor and he took advantage of it. Many of us come into this world and go through it, and at the end the account is evenly balanced. All that the world has given to us has been returned, but nothing more. Others come into the world and give it very little and get a great deal, so that they die in debt to the world. This man received from this world much in every way; he gave it all back; more than that, he gave a great deal more than he received, and leaves this world, not Brooklyn alone, but the whole world, largely his debtor. No higher tribute could be paid to any man than this—a complete life.

HEALTH OFFICER OF THE PORT OF NEW YORK.

Dr. Wm. T. Jenkins, who has just been appointed Health Officer of the Port of New York, was born at Holly Springs, Mississippi, in 1855. He studied medicine at Bellevue Hospital Medical College, New York, and at the University of Virginia, from the latter of which schools he graduated. He settled in New York. In 1882, he received the appointment of Coroner's Physician, and afterwards became Deputy Coroner, in which position he is now serving his fourth term. By his appointment Dr. Jenkins becomes *ex-officio* a Commissioner of the New York Board of Health, the other members of which are Charles G. Wilson, President; Dr. Joseph D. Bryant, and President Voorhis of the Police Board.

A TRIP TO BERMUDA.

Dr. J. B. Mattison is organizing a ten days' excursion of physicians to Bermuda. The intention is to sail the latter part of March. Specially reduced rates have been secured. The party is limited to ten in number. Full details can be obtained from the doctor.

SIR MORELL MACKENZIE.

The death of this eminent specialist took place in London on February 3.

ANNOUNCEMENT OF COMPLIMENTARY DINNER TO DR. EDWIN COLT.

Brooklyn, February 1, 1892.

Dear Doctor :

In a few weeks Dr. Edwin Colt, of 80 Morton Street, will have finished his sixtieth year of practice in this city. Dr. Colt was graduated from the Berkshire Medical College, March, 1832, and has been in uninterrupted practice ever since. Many physicians have thought it opportune to celebrate so interesting an event, by tendering him a reception and dinner on Wednesday evening, March 16, 1892.

The price of tickets is five dollars, but as this amount will not cover the expenses, additional contributions are solicited. It is impossible at present to state the place where the dinner will be given, but just as soon as we know the number that will attend, a ticket naming the place will be mailed you.

Please send your remittance to Dr. Reuben Jeffery, Secretary of the Committee, 87 South Ninth Street, Brooklyn. A prompt reply will be appreciated.

Respectfully requesting your coöperation in making the occasion a pronounced success, we are

Very respectfully,

Chas. Zellhoefer, M.D.,	A. H. Ritter, M.D.,
Lewis S. Pilcher, M.D.,	E. H. Wilson, M.D.,
J. L. Kortright, M.D.,	J. C. Schapps, M.D.,
James W. Fleming, M.D.,	E. C. Carroll, M.D.,

Reuben Jeffery, M.D.

Committee.

NEW YORK'S GREAT FOOD EXPOSITION.

The citizens of New York, in 1892, propose to celebrate the discovery of America in their own way, assisted by representatives from every State and Territory in the Union. A great food show is to be held at Madison Square Garden in October of that year. It is proposed at this Exposition to show the progress made by this country in the last four hundred years as regards our food supply. The United States is the greatest food-producing country in the world, and as food is the one thing above all others that first claims the attention of the human family, it is safe to predict that the coming Exposition will prove one of the most interesting events of the century. It is an Exposition that all New Yorkers may well be proud of.

This is the only affair of the kind ever held in the world, not even excepting England. Only food products will be allowed on exhibition, exhibitors being restricted to manufacturers or producers, no dealer as such being allowed to participate. Every article of food exhibited must bear the bona fide name and address of manufacturers, all fictitious brands being rigidly excluded. Liquors, specifics and patent medicines will not be allowed. Every manufacturer exhibiting must guarantee that his goods at the Exposition are the same as is offered for sale to the public.

The various "Food and Health" shows held throughout this country have no connection with the Food Exposition to be held at Madison Square Garden, in October next, this latter being entirely in the hands of the manufacturers and producers.

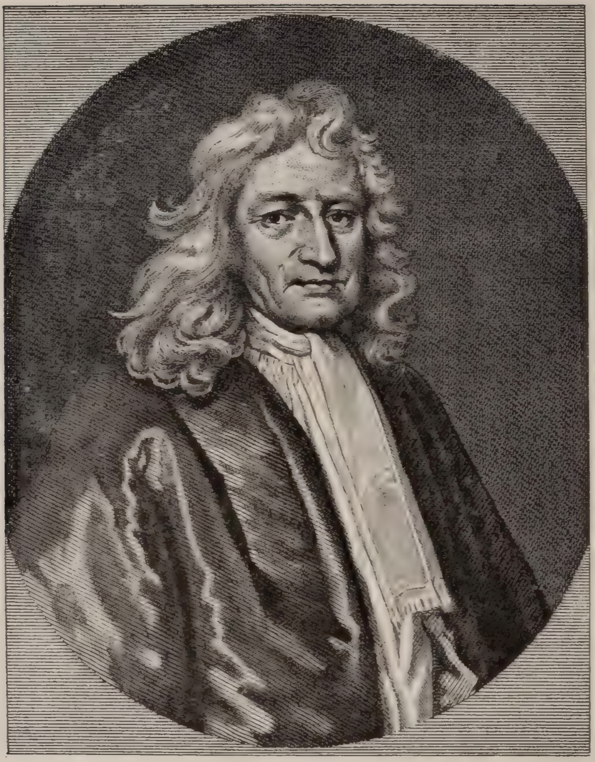
THE NEW YORK STATE EXAMINATION.

The following list shows, according to year and college, the numbers of those who have availed themselves of the clause passed by the last Legislature, which frees them from a State examination:

New York Medical College and Hospital for Women	15
Niagara University Medical Department, Buffalo	19
Syracuse University College of Medicine	29
Woman's Medical College of the New York Infirmary	42
Homœopathic Medical College of the State of New York	43
Eclectic Medical College	48
Long Island College Hospital	68
Albany Medical College	70
University of Buffalo	108
Bellevue Hospital Medical College	120
University of the City of New York	169
Columbia College of Physicians and Surgeons	182
Total	913

Correct.	
Class of 1869	1
" 1879	1
" 1880	1
" 1881	1
" 1882	1
" 1883	1
" 1884	8
" 1885	10
" 1886	25
" 1887	50
" 1888	112
" 1889	588
" 1890	104
Total	903

Defective.	
Class of 1884	1
" 1887	2
" 1888	2
" 1889	4
" 1890	1
Grand total	913



PAUL CHAMBERLEN.

The history of the invention of the obstetric forceps reads like a modern romance.

Though forceps for extracting the child were described by Avicene and Albuceris and others, it does not seem that these were life-saving instruments, since they are described as having a sharp, beaked point at the extremity of each blade, and projecting teeth on the internal surface. These forceps too had a common fixed joint. It is to the Chamberlen family that we are indebted for making the modern forceps operation a possibility by this devise of a loose joint, allowing the blades to be introduced separately and united after their application.

The Chamberlens, or Chamberlains, as the name has become modernized, for several generations kept their invention secret, and made such use of it that they acquired great wealth and celebrity as accoucheurs. We first hear of Dr. William Chamberlen, who, with other Huguenots, was driven out of France and settled in England in 1569. There seems to be much confusion and mystery connected with the genealogy of the family as well as the history of the invention for which they were celebrated, for besides the Huguenot refugee spoken of we read of Peter, Peter, Jr., Paul, and Hugh. In 1647 Peter Chamberlen speaks in a monograph which he had written of the invention of his father, Paul Chamberlen, for saving the lives of infants during childbirth. It is probable that the date, 1658, which is attached to the original print from which this portrait is copied, approximates the date of this invention.

We find Hugh Chamberlen in a preface to his translation of Mauriceau's work on "Diseases of Women with Child and in Childbed" says: "My father, brothers, and myself (though no one else in Europe as I know), have by God's blessing, and our own industry, attained to, and long practiced, a way to deliver women without any prejudice to them or their infants, though all others being obliged for want of such an expedient, to use the common way must endanger if not destroy one or both. I will now take leave to offer an apology for not publishing the secret I mention we have, to extract children without hooks where others use them, viz., there being my father and two brothers living that practice this art, and I cannot esteem it my own to dispose of nor publish it without injury to them; and I think I have not been unserviceable to my own country, although I do but inform them that the fore-mentioned three persons of our family and myself can serve them, in these extremities, with greater safety than others."

With the exception of these two short notices, from which we learn nothing of the construction of their instruments or their methods of applying them, the whole family of the Chamberlens became extinct without their ever giving us any further account of their great secret, and a century and a-half passed away before it was known with certainty what instrument they had invented.

It was in 1818 that in a mansion in Essex, England, which more than a century before had been owned and occupied by Peter Chamberlen, probably the son of Paul and brother of Hugh, there was accidentally discovered in a secret place between the flooring of a closet and the ceiling below, a collection of old coins, trinkets, letters to Dr. Chamberlen from different members of his family, and some obstetric instruments.

These instruments became the property of a gentleman who presented them to the English Medico-Chirurgical Society with a paper describing them and the circumstances under which they were found, from which we quote:

"First we have the simple vectis, with an open fenestrum; then we have the idea of uniting two of these instruments by a joint, which makes each blade serve as a fulcrum to the other, instead of making a fulcrum of the soft parts of the mother, and which also unites a power of drawing the head forward.

"This idea is at first accomplished by a pivot, which being riveted makes the instrument incapable of application. Then he goes to work again, and having made a hitch in each vectis for the joint he fixes a pivot in one only, which is received in the corresponding female screw in the hole which is to receive it." . . . Next we have "a more light and manageable instrument, which instead of uniting by a pivot, he passes a tape through the two holes, and winds it round the joint."

From the roughness of the workmanship I am led to conclude that Chamberlen was his own artificer, a practice not uncommon in those days, when mystery and empiricism were not regarded as contemptible among the enlightened professors of science.

J. H. H.

THE

BROOKLYN MEDICAL JOURNAL

Published Monthly under the supervision of the Medical Society of the County of Kings.

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ORIGINAL ARTICLES.

COMPOUND FRACTURE OF THE CRANIAL VAULT.—REPORT OF TWO CASES.

BY DAVID MYERLE, M.D.

Surgeon to the Eastern District Hospital.

Read before the Brooklyn Surgical Society, November 5, 1891.

It is my privilege to ask your attention to two cases which were of unusual interest to the staff of the Eastern District Hospital, one of them involving a question of assault, determined largely by the character of the wound.

December 23, 1889. Service of Dr. Myerle. H. C. R. æt. forty-four; United States, printer. Admitted to hospital per ambulance 8.35 P.M., suffering from extensive scalp wound and fracture of skull, with depression over right frontal eminence. Patient had been thrown from his wagon to the street, and sustained the above injury. He was wildly delirious on admission, but very soon became comatose. The staff was summoned in consultation, and trephining decided upon, and immediately carried out: the point of selection being above, and upon the eminence on the right side; slight fracture of the outer table, and depression of the inner was revealed; the operation was successful in allaying the unfavorable symptoms. After the operation, and while on the table, patient had a severe chill; hot bottles and hypodermics were applied, he rallied, and came out of etherization quietly. Urine was drawn and he rested well during the night.

I will not detain you in detailing the daily changes; the highest temperature was on the third and fourth days, reaching 101° F., accompanied with slight delirium, due to accumulation and pocketing of pus; dressings twice daily obviated further trouble; granulation and cicatrization proceeded without material hindrance and the patient discharged January 28th. He was subsequently seen at his home, and after several dressings the wound was entirely healed.

You have therefore to consider a case of compound fracture with depression, accompanied by delirium, and rapidly developing coma; trephining was imperative not alone for the purpose of elevating depressed bone, but to ascertain the full extent of injury, especially as it was possible to find intra-cranial hæmorrhage. To concussion might have been attributed the primary delirium; cortical irritation of the anterior frontal lobes may be manifested by inability to control emotion, hence the excitement. The remarkably improved condition of the patient, however, immediately after the operation would seem to indicate the depressed bone as the prime cause of the symptoms, inasmuch as no intra-cranial hæmorrhage was present.

The later history presented the localizing evidence of frontal injury, in inability to concentrate attention, or think connectedly.

The procedure of reimplanting the bone disc was not adopted, and the specimen is herewith presented.

Case II.—Service of Dr. Fleming. W. S., æt. thirty-five; Ireland; stableman. Admitted per ambulance at 6 p.m., suffering from compound multiple fracture on skull on right side.

Examination on entrance showed two wounds, one situated on the right side, about two inches from the median line, the other on the same side four-and-one-half inches from the median line. From the orbital ridge to the centre of superior wound four-and-one-half inches; from same point to second wound five inches; distance between wounds two-and-one-half inches. The character of the injury called for consultation, and the staff summoned. Marked depression existed over right parietal and temporal region; pulse fair, pupils dilated; no other symptoms of compression. Patient was unnaturally quiet, but could be roused to answer questions, and gave an interesting account of himself, stating that while feeding his horses two men entered the stable and assaulted him with a club; that he was knocked down, but managed to get to the floor above, where he was found by the police; his story roused the authorities to activity, and the case was chronicled as "assault" in the public prints.

The wounds were washed antiseptically as there was evident comminution; both were united by incision, exposing the skull. It was then clear that the whole parietal area was crushed in. The fragments, eight in number, were removed, varying in size from a one to a two-cent piece. The dura mater was lacerated to a small extent. The flaps were brought together by sutures and antiseptic dressings applied.

Temperature after operation was sub-normal, but reaction obtained by hot bottles, etc. He rested well during the night; there was considerable oozing of blood, necessitating the taking down of the dressings at 3 A.M. A few hours later there was great thirst, and stomach promptly rejected all food; rectal alimentation resorted to. Temperature, 101°, pulse, 108; became restless. Evening temperature, 101.2°, pulse, 88, respiration 20.

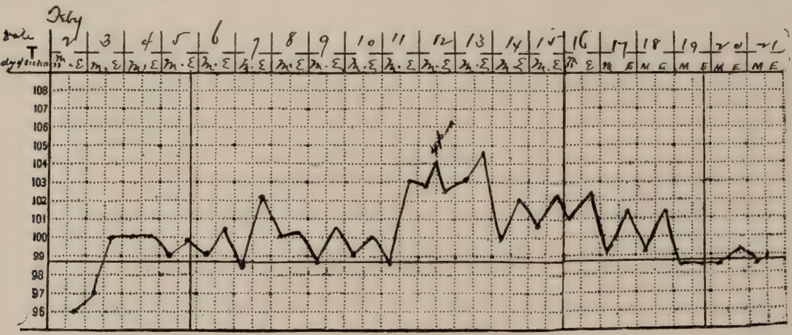
February 4th.—Better, although restless at times; talked incoherently when conversation prolonged, and persisted in asserting he was assaulted. Paralysis existed on right side of face, and partially the left arm and forearm, with wrist-drop; ptosis of the right lid also present. Stomach retained milk. On the fifth day following the injury patient more restless, with symptoms of delirium, and for several days the temperature ranged high, reaching its maximum. Eleven days after operation 104½°. From this period his condition, local and general, progressively improved, being remarkable for nothing, except on the seventeenth day an herpetic eruption on arms, thigh, buttocks and back.

Skin grafting hastened cicatrization. During the process of healing, seven pieces of bone, ranging $^1/_4$ to $1^1/_2$ inch long, and $^1/_{16}$ to $^1/_3$ inch in other diameter, were removed.

On July 10th, about five months from date of injury, the wound was entirely healed, and patient discharged at his own request. In selecting this case for your attention and discussion, I expected to present the patient, but learn since, he died of "grip" last spring.

The injured area in this case is vastly more important to the integrity of the individual than that of the frontal injury, and it was remarkable that so great a traumatism caused so little immediate disturbance; yet I find a case cited in which there was even greater injury *i.e.*, compound comminuted fracture in the right parietal region, laceration of the middle meningeal artery, and contusion of the brain, still, the patient never lost consciousness; indeed all the symptoms were slight, and so it was with the subject of this paper, although I am aware that the very fact of the wound being compound is a saving factor from compression, especially as related to blood clot.

The question of assault, while supported by subjective testimony, was not a consistent conclusion, taking all the circumstances into consideration. The hat of the man was found at the entrance to the stall, the crown torn in two places upon the right side, corresponding to the wounds upon the scalp; such wounds could have been produced by the kick of a horse, the corks on the shoe making the depressions alluded to; assuming this probability, it was further supported by his peaceable character and poor circumstances, thus excluding a motive on the part of others to assault him. The conclusion, therefore, was as intimated, that the strange story was a delusion; this indeed was his own judgment after the lapse of several weeks.



TEMPERATURE CHART.

As to whether the paralysis was evidence of destructive lesion in the injured area of brain tissue, or was produced by pressure of inflammatory products, the history points to the latter conclusion, as it was of transient duration, and relief was obtained in the establishment of free drainage. The loss of power affected the left arm, with wrist-drop; this harmonizes exactly with the conclusions of the physiologists Horsley & Schäefer, in locating the centres of motion governing the arm in the central area about the tissue of Rolando, precisely the site of injury.

The ætiology of the herpetic eruption is interesting, scattered as it was over the arm, thigh, buttocks and back; it would be consistent, considering the full history, to place it under the caption of dermatitis herpetiformis, which, according to Duhring & Stelwagen, may have its cause in "shock to the nervous system," or be septicæmic in origin, both of which influences attach in some degree to the case under consideration.

The temperature chart is herewith presented.

◆

SOME PRINCIPLES OF THERAPEUTICS, BASED UPON RECENT MEDICAL PROGRESS.

BY FRANCIS H. STUART, A.M., M.D.

Read before the Medical Society of the County of Kings, December 15, 1891.

The theme upon which I wish to engage your attention is one of great practical interest, vast extent, and is so difficult to present that I do not feel competent to set it before you, certainly in the manner to meet my own desire, and I fear not in a way to satisfy the demands of the position[1] the President has placed me in.

The less than twenty years during which I have been in practice have witnessed such changes and advance in medical knowledge that a medical Rip Van Winkle who dropped out of the current then, and who should wake up now, would indeed rub his eyes and ask, "Why, where am I?" He would not be certain of his own identity, and surely no one would know him. And yet so gradual has been the change, so slowly have the steps of advance been taken, that many, particularly the older members will, no doubt, say that I have made too strong a statement of the situation. But I think that a review in their minds of the words, expressions, thoughts, and ideas of twenty years ago, and those that are in every-day use, and which govern the practice of the present, will acknowledge that either the ideas have been reclothed in words or that an entirely new set of ideas has taken their place.

Let me invite your attention to some of the directions in which progress has been made, and later I will endeavor to educe some rules or principles of treatment, based upon our present knowledge.

At the present time, as never before in the history of medicine, therapeutics rests upon organic chemistry, physiology (which in-out: the point of selection being above, and upon the eminence on the right side; slight fracture of the outer table, and depression of the inner was revealed; the operation was successful in allaying the unfavorable symptoms. After the operation, and while on the table, patient had a severe chill; hot bottles and hypodermics were applied, he rallied, and came out of etherization quietly. Urine was drawn and he rested well during the night.

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[1] Chairman of the Committee on Practice and Therapeutics.

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The injured area in this case is vastly more important to the integrity of the individual than that of the frontal injury, and it was remarkable that so great a traumatism caused so little immehands of the profession. We can but hope that at last we are entering upon a new course of treatment which, if the disease is recognized sufficiently early, will enable us to cope with the greatest scourge of the human race.

But it is not alone with regard to tuberculosis and its family of diseases that we have the promise of a new era in therapeutics; there are many others to some of which reference will be made later on. At this place allow me to refer to another topic closely related to what has just been dwelt upon.

Of the knowledge thus far derived from bacteriological studies, it can at least be said that we have learned how to ward off disease to an extent that would have been impossible without it. Preventive medicine is to-day a large and most important branch of the medical art, as well as of its science. This is positive, practical gain. Our knowledge of the nature of individual diseases has not only helped to establish principles of prophylaxis, but the poisons of the several diseases, tuberculosis, cholera, diphtheria, malaria, anthrax, pneumonia, and others have, with more or less positiveness, been made out, and this knowledge is already leading to the study of means for destroying these micro-organisms even after they have taken possession of the body, that is for more certain means of treating developed cases. Perhaps it is too early to attempt to claim definite results in this direction, but we seem at least to be on the eve of several new specifics.

One of the most striking evidences of the change in the basis of our knowledge of disease and therapeutics is manifest in the style and character of medical writings. I say the style and character. As regards the first we notice that there is much less of speculation, of setting up of theories which are based upon "views" of clinical phenomena or the observed action of drugs, and then an elaborate speculation as to the cause or *modus operandi*. The most marked characteristic of the writings of the present day is that they present a record of experiments, carried on with the most scrupulous attention to details, with a careful elimination of disturbing factors, by the use of the highest development of scientific and chemical means. Our text-books are much more scientific. This is especially noticeable in the department of bacteriology, but is almost equally so in the domain of chemistry and physiology. These two latter departments of study have recently taken their proper place as being at the foundation of all medical knowledge. For a time chemistry was looked upon by the student of medicine as of secondary importance, and possessed of little interest. Physiology was, perhaps, always recognized as more useful. But neither of these subjects was regarded as having that supreme value which is now accorded to them. In the most recent works upon medical practice bacteriology occupies a prominent place. What was formerly dismissed in a few pages now occupies a large portion of the work. In the best medical colleges there are several new chairs, histology, pathology, and bacteriology, which have equal rank with the long-established "seven." Twenty years ago it was the exception for a medical student to have or even know anything about the use of a microscope ; now no student can graduate without a thorough training in its use in all its applications to medicine.

It is impossible that such a great change can have taken place in the manner of the study and investigation of diseased conditions without producing a corresponding change in the practice of the art. Perhaps the changes have taken place so gradually that we do not often think of them or the results produced by them, but certainly a change has been made, and is still going on with a rapidity which, if it were a political one, would be called revolutionary. And it is not merely in the scientific or theoretical side of medicine that this change has been going on, but in the application of these great acquisitions of knowledge to the care and treatment of the sick. Out of it has developed the great department of hygiene. Closely allied to this branch, and yet scarcely separable from it, is prophylaxis, the art of preserving health. Both of these have resulted from the study of the causes which produce diseases. Certain general principles are perhaps no better understood or practiced than in the days when William's "Principles of Medicine" was the best exposition of an enlightened common-sense in regard to the care of the body, the location of the home, the baneful effects of bad ventilation, and other unsanitary conditions of life ; but our knowledge of the essential causes and nature of diseases, many of which are removable or destructible, have vastly extended the scope of hygiene and prophylaxis. These departments can now boast of elaborate treatises, able journals, large and influential associations, devoted to their study and promulgation.

Yet another evidence of the presence of a leaven at work in the body medical, which is so quickening its activities and enlarging its labors, is that societies established for certain limited purposes have had to broaden their scope. Of this the programme of our local Pathological Society for the current year is evidence. It is a significant fact that the London Pathological Society, a society which in all its history has confined its deliberations to morbid anatomy and anatomical pathology, has recently resolved to "enlarge the society's work so as to include the communication of researches which, though not anatomical, are still pathological in the widest and highest sense, and that in the *Transactions* of the society should be found as complete a record as possible of all work bearing upon the essence and nature of disease." Commenting upon this new departure, the President, in his Presidential Address, said "this step is most encouraging and far-reaching, and promises great success to the future of the society and a wide extension of its work. Indeed, such an enlargement of its scope is absolutely necessary to keep the society abreast of the times. * * * But it is quite clear that the great advances in the future of pathology must be looked for not so much in this direction [morbid anatomy and anatomical pathology], as from researches into the essence and causes and processes of disease, and we may hope that through them will be founded more rational and scientific treatment, and the gradual substitution of it for the empirical methods which have so long ruled."

In presenting a brief review of the changes which have taken place in the study, teaching. and the art of medicine during the past twenty years, mention must be made of one or two other subjects besides those already referred to, though to speak of them in detail would more than occupy the time allotted to this paper. Antiseptics and disinfectants occupy a place of scarcely less importance in the department of medicine than they do in surgery. Epidemics of the infective diseases are controlled and arrested by the intelligent use of these agents; and that their use in destroying the germs before their dissemination has in numberless instances cut short what otherwise would have been epidemics, is a subject too familiar to require more than a mention in this presence. Suffice it to say that they are our most common weapons, which we use with increasing confidence and satisfaction as time and occasion demonstrate their utility.

Let me now direct your attention to the other division of the subject of this paper, that of therapeutics. Therapeutics may be defined as that department of medicine which relates to the care of the sick. It includes the preparation of medicines and their administration, the regulation of the diet, as well as prophylaxis and hygiene. It is somewhat difficult to formulate a good positive definition of disease. In health there is an equilibrium of function: in perfect health this equilibrium is perfect. In disease, no matter what its cause or nature, whether it be local or general, infectious or non-infectious, the most striking fact in every case is the disturbance of certain functions. Disturbances of function are, on the one hand, causes of disease; or, on the other, they are the beginnings, or indications of the beginning, of severe acute or chronic diseases.

Many, if not most, of the so-called "slight ailments" illustrate the close connection between the different organs of the body: how when one is disturbed, even though very slightly, any other with which it has close relation will in turn be affected, and this again is a link in a new chain of disturbances, no one of which by itself constitutes a disease, but which taken together create a *dis-ease* on the part of the patient, which leads him or her to consult the physician. A ready recognition of the relation of one organ to another, a thorough knowledge of physiology, and reflection on the trivial complaints, direct the careful physician to investigate these complaints and enable him to give appropriate treatment, where the careless one gives a "placebo" and thinks that he has been shrewd. Placebos may be required in some cases, but too often they are the shift of ignorance or indifference. One hears much less about them in these later days than formerly; but this may be partly explained by the fact that the patient with a slight ailment seeks advice of the prescribing druggist or the chance acquaintance on the ferry-boat or street-car, while the sudden and pronounced attacks of illness are those for which the regular medical attendant is consulted. These slight ailments, however, are often the precursors of serious troubles, if not properly treated.

If we turn our attention to distinct diseases, a judicious therapeusis requires that we should make a classification of diseases. Many systems of classification have been made, all of which differ in more or less essential particulars. With the advance of knowledge, diseases change their place in any system of classification. But it will be sufficient for the purposes of this paper to divide diseases into specific and general. Under specific I would class all those whose cause has been traced to a germ, or whose germ has been discovered. Most of these, while having a local or visible manifestation, affect the whole system. Many of the other diseases here spoken of as general, are local diseases with a systemic disturbance. But this latter distinction between the two classes will not be developed here.

What has now been stated enfolds two ideas that contain principles of therapeutics which are cardinal: (1) that in treating disease we must study the disturbance of function, and (2) that we must recognize the specific nature of certain diseases whose poisons we may be able to destroy or render inert.

There are certain disturbances of function that are present in almost every form of disease. Of these, those of first importance are the disturbances of the alimentary tract: the taste is abnormal; the tongue is coated or denuded; there is anorexia, thirst, nausea; gases develop in the stomach or intestines; there is diarrhœa or constipation; gastric or intestinal hæmorrhage.

In most, if not all diseases, there is functional disturbance of the nervous system: there are abnormal sensations (pain); somnolence or insomnia; restlessness; local or general convulsion; local or general paralysis.

Most disease processes are accompanied with an elevation of the bodily temperature. It was formerly held, without question, that the degree of this was the measure of the cellular activity which the disease occasioned. This is one of the questions that have been reopened, and it is now held, based upon the most recent experiments made for determining this point, that the chief factor in causing an elevation of temperature above the normal is the arrest of *elimination* of heat. It is a notable fact that there is a normal point, which is closely approximated at all seasons of the year, in all latitudes, under the most diverse circumstances. It is not to be doubted that to a certain extent the elevation of temperature in disease is due to increased metabolism; but this is the smaller factor. The larger factor is that the balance which normally exists between the production of heat and its discharge is disturbed by the effect of the processes of disease upon the mechanism which regulates the excretion of heat.

Closely connected with this phenomenon of elevation of temperature, and to a certain extent dependent upon it, is the abnormal action of the heart: its action is increased. The number of respirations is increased (usually) *pari passu* with the pulse.

Two other functions which are common accompaniments of disease are the suppression of the excretory action of the skin and diminution of that of the kidneys. To these are chiefly to be attributed the elevation of the temperature, since these, aside from the removal of waste products, are the principal regulators of the temperature.

From this review of the disturbance of the physiological functions which takes place to a greater or less extent in most, if not all diseased conditions, it is distinctly seen how the various organs of the body form a chain, and that if one link is disturbed all the others are more or less affected. I have spoken of these disturbances as they take place in connection with different diseases, not as themselves diseases, but as the symptoms which accompany diseases.

This brings us to the elucidation of what I have denominated as the first of the two cardinal principles of therapeutics, based upon our present knowledge: the treatment of the symptoms. In treating diseases we have to choose between two modes, the symptomatic and specific. Of the drugs which we call "specifics" the list is very short. Even in those diseases for which we claim to have specifics, we still treat the patient symptomatically, not relying solely upon the specific. We are wise and prudent when we adhere to the precept of Trousseau: "Generalize the disease, individualize the patient." No judicious practitioner relies upon the administration of a single medicine day after day in the course of even a slight illness; he treats the accompanying symptoms as they arise. Our increased knowledge of the physiological action of the different drugs enables us to meet the symptoms with more certainty, just as our wider and deeper knowledge of pathology and the use of instruments of precision has resulted in more discriminating diagnosis and a more minute classification of the ailments we are called upon to treat.

I placed the disturbances of the alimentary tract as the first of the symptoms of disease. Its function of alimentation being in abeyance, it is important not to attempt to force it in this direction. The various fasting experiments and exhibitions have done great service in showing how well the body is sustained upon simple drinks, and so we no longer have to contend with the fears of friends who are anxious lest the patient should die from starvation when hearty food has not been taken for four-and-twenty hours or more. The absence of appetite is the hint not to load the stomach. The great poet was never wiser than when he said:

"Now, good digestion wait on appetite,
And health on both!"

We meet the symptom of anorexia by a masterly inactivity.

Accompanying this condition of the stomach are others which indicate a derangement or suspension of the action of the processes of assimilation: diminished or increased secretion of juices, gastric and intestinal, disturbed action of the glands associated in the processes of digestion: the liver, spleen and pancreas. Fermentation in the intestines gives rise to flatulence; or there is diarrhœa, often no doubt the result of the abnormal and poisonous products of decomposition of the intestinal contents. In such cases the diarrhœa is another instance of the effort of nature to bring about a restoration to health by getting rid of deleterious material. But very frequently there exists the opposite condition, that of constipation.

It is important to give attention to the condition of the digestive tract in all the conditions which lead patients to consult a physician. It may not always be wise to let the patient know that any special attention is being given to the digestive tract, either as regards diagnosis or treatment; but it seems to me that attention should be given to it as if that were the principal apparatus affected. In no case of illness is attention to this part of the economy amiss. Let me say in passing that, whether constipation or the opposite condition exists, a dose of calomel has a most salutary effect in almost every case of illness. It matters little what organ or system of the body is affected, such medication is followed by benefit to the patient's condition. Our predecessors knew its value empirically; it was a cardinal principle in the older practice. Its *raison d'être* was left to the discovery of modern investigation; its action is antiseptic, preventing the formation of injurious products, as well as expelling those that may already have been formed, and which may have set up a diarrhœa. The effect of this line of treatment in such cases is most striking. Apart from its action as a purgative, and equally important, is its effect in opening up this great sewer of the body, the intestinal tract being one of the great emunctories.

I will not take your time in referring to the symptomatic treatment of the other disturbances of the digestive tract, as nausea, hæmorrhage, etc. I may say in passing that where there is thirst we have another hint from nature which we do well to heed.

Nor must I take up the other disturbances of function, those of the nervous, circulatory, respiratory and urinary systems, with the detail I have those of the alimentary tract, lest I trespass too much upon your patience. The large number of remedies, new and old, whose action we understand much better than formerly, and the range of whose effects we know, furnish the physician with the means for controlling these functions to so great an extent that he is able to guide a disease through its course much as the mariner does his ship through a storm. Some of these remedies have several actions: analgesic, antipyretic, and diaphoretic. One of the most striking advances of recent years is that we are coming to a knowledge of the existence of a relationship between the chemical constitution of drugs and their physiological effects. From the chemical structure of a substance we are able to predict its effects upon the body. The chemist, therefore, is now able with tolerable certainty to produce a drug that will accomplish a certain desired effect. The aniline dyes were discovered by Perkins when experimenting with reference to making quinine synthetically. This was the beginning of those studies which have given us the whole group of aromatic compounds, whose numbers are increasing so rapidly that there is an embarrassment of riches, among the most important, valuable, and best known of which are antifebrine, antipyrine, salicylic acid, acetanilide and sulphonal. At the present time, in the treatment of diseased conditions, in the language of Harvey, (First Lines of Therapeutics, p. 59,), "we have come to be more *precisely* active and with more *definite* aims."

Next I will call your attention to the specific diseases. They are those diseases whose active agent is a germ, a poison introduced into the system from without. To this class belong such diseases as small-pox, scarlet fever, measles, diphtheria, pneumonia, tuberculosis, and others. Excepting tuberculosis, these diseases clinically are recognized by their running a definite course. We say that they have a stage of development, of maturity, and of decline, with a natural tendency to recovery, if the conditions of the patient are favorable, or to death, if the vital powers of the patient are insufficient to cope with the disease. The poison, which is its essential cause, during the course of the disease completes its life history : the germ is introduced into the system, there develops to full maturity ; multiplies its kind, which play their part, and then die ; just as a grain of corn, when put into the soil, germinates, develops into stock, blossom, fruit, ripens, and then drops from the stock, thus completing its life history.

In the treatment of these diseases we keep in view these facts regarding them : that they are infectious ; that they have a definite course ; that their tendency is to self-limitation. These furnish us with the principles of treatment. Perhaps it would be well to call it principles of management.

The first consideration is to seclude the patient, so that the sick shall not contaminate the well. Here we apply all the knowledge which the study of hygiene in its widest meaning has taught. The second fact, that the disease has a definite course, requires that its effect upon the system should be studied and watched. In the case of the exanthematous diseases, these effects pertain to internal organs. The arrest of the excretory function of the skin, added to the presence in the blood of the specific germs which cause the disease, often produces high temperature, exhausting action of heart and lungs, and overwhelm the nervous centres, so that the patient quickly passes into a condition of imminent peril. Sometimes there is a salutary effort of nature to eliminate the two kinds of poison by a profuse diarrhœa. In such a case it is well to allow this to pass unchecked ; often it proves the salvation of the patient. If such a diarrhœa does not come on it is always prudent, even wise, to administer a safe cathartic. It is in these cases that calomel is so valuable a remedy. There is none more so.

In these diseases the temperature requires special attention. High temperature will kill, no matter with what it is connected. In the new remedies, antifebrine, antipyrine, and others of scarcely less efficiency, we have valuable agents. But there is another mode of treating high temperature which is not so often used as it deserves, especially in view of the fact that the medicines that have just been enumerated not infrequently have a bad, even dangerous, effect; and, too, they cannot always be administered. The means I refer to is the abstraction of heat by the bath (sponge or immersion) and the wet pack. I am sure that a more general use of the external application of water at suitable temperatures would materially reduce the mortality in this class of diseases. The internal use of water, also, is of great value. The sparkling waters are more palatable and readily taken than are the charged waters. If the latter are used, part of the gas should be driven off by stirring before presenting them to the lips of children patients.

The present state of our knowledge does not warrant a positive statement as to specific remedies for these diseases. We possess germicides which are positively efficient when applied to the living germ. But they are powerful chemicals, destructive to other living tissues. They cannot be administered by the mouth or subcutaneously, except in the case of germs in the intestine, as in typhoid fever and for the other poisons, such as the ptomaines, in sufficient strength to be efficient without poisonous action upon the general system or destruction of the tissues with which they come in contact. And yet there are certain physiological facts which have been established by the study of micro-biology and the study of the mode of action of certain drugs which may soon lead to fruitful results in this direction. Corrosive sublimate in strong solution destroys every form of protoplasm and kills bacteria. But by forming double salts of mercury or by saturating it with albumen its harmful action is decreased and its germicidal power is increased.

The most plausible explanation of the action of specifics is that based upon the recognized fact that certain medicines tend to act upon one kind of tissue more than upon others. Also, diseased tissue is more easily acted upon than healthy. Hence it is that the albuminous compounds of mercury act upon diseased tissues and upon the disease germs more powerfully than upon normal tissues: that is we are coming to a knowledge of germicides which points to their use as specifics for the diseases whose germs they will destroy. Such remedies will enable the physician to shorten the course of this class of diseases. These remedies are now used with effect in diphtheria, typhoid fever and cholera. Just at the present time there is much advance towards positive therapeutics.

Since these diseases belong to the class called "self limited," the next principle in their treatment is to guard against the tendency in this or that one to so undermine the system as not to enable it to survive till the end of the course is reached. It is also necessary to bear in mind that most of these diseases have sequelæ, which are in themselves dangerous, or result in permanent disability. It is this fact that makes even cases that are commonly not considered severe of scarcely less importance than those that seem more violent. From the study of the natural history of this class of cases, we have learned to be watchful of every case, whether light or malignant. Reference is here especially made to the affections of the eye and ear after measles; to the nephritis, and serous and glandular inflammations which follow scarlet fever; to the paralyses which occur after diphtheria.

DISCUSSION.

Dr. Henry Conkling:—We have all, I am sure, listened with much pleasure to the paper which the Chairman of the Committee on Practice and Therapeutics has just read, and we have also been instructed by the valuable principles presented. As he hinted in the paper, in the study of disease some of the most interesting work which the physician does is the attempt to find out just what conditions are present. Of course such an attempt at once gives rise to the question: What drugs shall be used? If one's cases are sufficiently large in number there will probably be found a certain uniformity in the way that drugs act and the results produced. Isolated cases occur now and then, which seem to prove the exception to the rule, but hardly in sufficient number to lessen the strength of the statement. I have noticed in the study of heart cases that that organ will respond to treatment very quickly, and this has been more strikingly illustrated if, in addition to the special heart drug some other drug is given (not necessarily in the same dose, but at some other time,) to act upon organs or tissues removed from the heart, the stimulation of which indirectly, but very materially aids the action of the special heart drug.

The paper this evening has dealt somewhat with therapeutics, and a report of some cases in hospital work may be in keeping with the tenor of it. The cases to which I shall refer, have been those in which there have been collections of large amounts of fluid in cavities or tissues of the body where normally no such amount of fluid exists. In August, 1890, a young girl æt. fourteen, came to the Brooklyn City Dispensary. The primary cause of her trouble was mitral stenosis, with accompanying hypertrophy of the right heart. She was put upon treatment and kept under observation for some months, being sometimes better and sometimes worse. It soon became evident, however, that her hygienic surroundings at home were not very good, and she was finally induced to enter St. Peter's Hospital. At that time the examination showed that all of her organs and tissues were completely waterlogged; there was anasarca extending from the lower extremities up to the hips, congestion of the liver, venous fulness in the pulmonary circulation, and ascites. I mention this latter condition, because in my cases of mitral disease, whether of regurgitation or stenosis, I have made very few notes of the presence of ascites.

Some time before this girl came to the hospital, Germain See, of Paris, had published in La Semaine Médicale of that city, the statement that lactose, or the ordinary sugar of milk, was a good diuretic in cases of ascites, where the kidneys were not primarily affected. His observations were based upon a few cases. The note seemed one worthy of being remembered. When the case came to the hospital it seemed to be one adapted for the trial of the drug, more so because examination of the heart showed there would be no danger in trying the experiment, and in order to make it a scientific test, no other drugs were given; and the diet, while concentrated and nutritious, did not contain a large amount of fluid. The child was put to bed, and for the first twenty-four hours she was given one teaspoonful of sugar of milk every two hours, night and day, being awakened during the night for the doses coming then. The next twenty-four hours, two teaspoonsful were given, and that was continued for ten days. On the day of admission there was passed eight ounces of very abnormal urine; on the sixth day, sixty-two ounces of normal urine, and on the tenth day, fifty-five ounces of normal urine; the anasarca and ascites disappeared and the venous fulness was much less. After the sugar of milk was discontinued the urine fell to thirty-four ounces, and kept between thirty-four and forty eight ounces for many weeks, and the child was in good condition. After a while a certain amount of anasarca returned, but was easily controlled by remedies directed to the heart. There have been other cases in hospital work where there were collections of fluid in the pleural cavity—pleuritic effusion; and the abdominal cavity ascites. We hear it stated that it is impossible to remove from the body by drugs, large collections of fluid. It has been my good fortune in the last three years to have had a large number of these cases, and they have afforded a line of very interesting experiments in drugs, using particular remedies for particular cases, and the results in treatment, particularly in the last twelve months, have been very satisfactory. There have been cases where all the diagnostic signs, particularly those referring to cardiac displacement, have shown that there was a large collection of fluid in the pleural cavity, which was verified by the introduction of a hypodermic needle.

Attention has first been paid to the bowels and then the patient given fairly large doses of iodide of potash, ten, fifteen, or twenty grains three or four times a day, and the fluid has been removed. Iodide of potash is a good diuretic and an excellent sustaining cardiac stimulant; citrate of caffeine was given in a few cases and aided the treatment. The cases of ascites were the most interesting in their treatment, and demanded great variety in the use of drugs; the principle of the greatest importance here being the multiplicity of means, and not any one drug. Certain rules have been followed in giving the drugs. If a case of ascites, when seen upon its first examination, is given some one of these special cardiac drugs, the chances are in nine cases out of ten that the fluid either remains stationary or increases in amount. Dr. Lauder Brunton, in his lectures at the St. Bartholomew's Hospital, has called attention to the drugs belonging to the nitritex family—nitro-glycerine. Spiritus ether is nitrosi and sodium nitrite. The action of all these is the same; it is to reduce arterial tension and dilate the blood vessels; I have found them useful in the treatment of the second and third stages of ascites.

During the last of November of this year, a man entered St. Peter's Hospital who had a well-marked tachycardia, with some œdema of the lower extremities. He was given the fluid extract of convallaria and did well for two or three days, but on the third day he developed a very large ascites; it was the more difficult to treat because it came on so suddenly, as Fothergill years ago pointed out. The relation between the ascites and the heart condition was at once apparent. He was given an injection by the rectum twice the first day, and then as required for several days afterwards of Epsom salts, one or two ounces in four ounces of water; then ten grains of calomel was given every second night until three doses were taken. As soon as cartharsis had appeared the patient was put upon a cardiac drug, which was digitalis combined with potash salt. One hour after the administration of the digitalis, he was given a dose of nitro-glycerine; half an ounce given every three hours until four doses were given, and he drank largely of a solution of cream-tartar water. By these drugs the heart was being treated, the kidneys were being stimulated, the blood-vessels throughout the body kept wide open and free catharsis maintained. The result is that the fluid has entirely disappeared, and to-day he is walking about the ward a very comfortable patient. The special cardiac drugs that will produce diuresis or diaphoresis are large in number. They can be divided into two classes, both increasing the strength of the heart; one does so by slowing its action, of which digitalis may be mentioned as the principal one; and the other increases its action, of which class belladonna is the chief. Then there are the saline group; the potash salts, nitrites, remedies that produce sweating, and the drugs that produce watery diarrhœa, of which croton oil is the best. When one of the four stronger preparations of alcohol has been indicated, gin generally has been used and it has given good results. These cases of abdominal ascites in hospital work have increased until a sufficiently large number have been observed to analyze, and I have made for my guidance in treatment four rules which have aided me very much in the management of the latter cases.

1. To remember the element of time. Ascites in the vast majority of instances is a condition developed slow, and slow means should generally be adopted for the removal of the fluid. There is no necessity to use the trocar at once.

2. That it is far better for the patient to remove the fluid by natural means than by unnatural. I have noticed frequently that in ascites where an operation has been performed and the fluid has returned, that a second operation has invariably been necessary, whereas where the fluid is first removed by drugs the duration of the second treatment by drugs has been shorter. It would seem as if the first treatment stimulated the vessels and made them respond with greater activity in the second.

3. This rule relates to the heart. We examine a case of ascites and the heart seems labored. The probability is that there is no real weakness in the heart, but there is a relative weakness due to position acquired slow, from fluid pushing up the diaphragm; or from pressure of a large amount of fluid on the vessels. It is always safe in these cases to give some remedy that will produce violent diarrhœa of a watery character, or profound sweating. There is no danger of weakening the heart from that cause for the reason that such sweating or diarrhœa removes from the body a portion of the cause of the relative heart weakness.

4. This rule embraces all the others: Treat first the skin and next the bowels; then give some one of these special cardiac

drugs, guarding its action always by the administration of some remedy to keep the blood-vessels wide open, and then give all the other remedies available to remove the fluid. By this method the chance of the special cardiac drug doing better work is increased, and the percentage of successful cases is made much larger.

Dr. EVANS:—One portion of the paper refers to a function of the skin, the importance of which no one doubts, viz.: Perspiration, as a potent factor in disposing of superfluous animal heat. I wish, however, to suggest for Dr. Stuart's contemplation, the fact that covering the skin with a varnish, thereby abolishing the function of the sweat-glands, will also lessen the body temperature.

Regarding the development of disease from a bacteriological standpoint, I saw an interesting case of typhoid fever about one year ago. The patient had been taking twenty minims of beechwood creasote daily, two months prior to (and during) the development of that affection. The case terminated fatally.

CHLORALAMIDE.

ITS ACTION BASED ON A STUDY OF 280 CASES.

BY JAMES WOOD, M.D., BROOKLYN,

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In giving an opinion of the value of a drug, and in this case of a hypnotic, it is necessary to be particularly careful, as there are so many known and unknown factors which combine to produce the somniferous state, that it is often difficult to determine which adverse element to its enjoyment is antagonized by the medication used. Again, the organism may be abnormally susceptible to or against certain physical agents, so that we have in different conditions different procedures in accomplishing a state of physical and mental relaxations at our command. These may be drugs, different temperatures, electricity, or even suggestion.

The compound which is the subject of this paper acts by virtue of its power to quiet the irritability, normal or otherwise, of certain nervous centres, and *induce* a condition which we term sleep.

Chloralamide, or more properly chloralformamide, is, therefore, a pure hypnotic. The drug is a chemical union of chloral anhydride with formamide. It is soluble in water (10–14 parts) and alcohol (1–1½ parts).

When introduced into the alimentary canal it is quickly absorbed and passes into the general circulation where it is gradually broken up with the liberation of chloral. The existence of free choral in the organism would, if in sufficient quantities to produce hypnotic effects, lower the cardiac and respiratory action by direct effect on the ganglia governing these functions, which is not to be desired in many cases. When in combination with the formamide, as in this drug chloralamide, these functions of the medulla are stimulated, and the depressing influences of chloral counteracted.

The effects of this drug on the nervous system other than the production of cerebral anæmia—sleep, and the lessening of irritations to a certain degree, are practically *nil.*

Its influence on respiration is decided. In ordinary doses it stimulates the respiratory centre and greatly depresses it in toxic quantities—death resulting from paralysis of respiration and not from cardiac failure as in chloral poisoning.

The sphygmographic tracings show that the blood pressure practically remains uninfluenced except just before death, when it is diminished about nine-tenths ($^9/_{10}$) of the total pressure; this seems to be from cardiac enfeeblement rather than from any influence on the vaso-motor system.

Slight influence, if any, is exerted on digestion, temperature, appetite or secretion of urine.

The chief therapeutic indication for the employment of this drug is in diseases, organic and functional, where hypnotics are required for insomnia, except when it is the result of great mental excitement or pain, and even in these cases it will often ameliorate the condition. It is especially useful in the insomnia from high arterial tension in Bright's diseases. Its range of usefulness is therefore very large, for insomnia is a very distressing symptom of a large number of disease-processes.

Its stimulating effect on respiration would specially indicate its use for the night-sweats of phthisis. The depression following this condition does not seem to be due to the sweating *per se*, but rather to the effects of a gradual increase in the quantity of carbonic acid gas in the blood incident to the difficult interchange of gases from the pulmonary lesion. In phthisis, when the daily exertion from excessive coughing or other physical causes more than exceeds the supply of energy and nutrition which can be furnished by the body, the respiratory centres are greatly depressed, and not so quickly stimulated by a quantity of carbonic acid gas in the blood which ordinarily would effect them. The sweat centres are not affected by the physical causes and respond to the stimulation of the increased amount of carbonic acid and pour forth their secretions abundantly. A respiratory stimulant would combat this functional perversion, and as this kind of a therapeutic agent we can recommend chloralamide.

When the drug is given for its hypnotic effect its physiological action is noticed in from thirty (30) to ninety (90) minutes, and the sleep induced lasts from five (5) to nine (9) hours, is natural and refreshing and not followed by any unpleasant sequelæ. No symptoms of cerebral congestion or any unpleasant sensation in the head or other parts of the body are experienced. No evil effects followed the continued use of the drug for ten (10) days, and during this time it was not necessary to increase the dose, nor was its hypnotic effect diminished. Any psychological influences can therefore be eliminated. There is no cumulative action of the drug nor are there any cases on record of where a habit has been formed. The best time for administering the drug is just before retiring. It can be given in capsule, dry on the tongue, as an enema, or preferably in solution. As palatable a combination as one could wish is the following, which will be found useful in private practice. It is a pleasant mixture with a slightly acid taste:

℞	Chloralamide - - - -	ʒij
	Tr. Cardamon Co. - - - -	℥i
Misce bene et adde :		
	Syr. Aurantii.	
	Syr. Rubi. Idæi aa - - - -	℥ss
M. et Sq. : From one-half (½) to one tablespoonful repeated.		

The dose which yields the best result is from thirty (30) to forty-five (45) grains. Not more than one hundred (100) grains should be given in twenty-four hours.

The conclusions based upon its use in two hundred and eighty cases are briefly, as follows:

That it is a most useful hypnotic, reliable, safe, and pleasant.

That it has a place as an anhidrotic in phthisis.

That it is superior to other drugs because in hypnotic doses it stimulates respiration, and but slightly, if at all, influences pulse, temperature, or urinary secretion.

That no collateral symptoms of any consequence exist.

That the best hypnotic dose for an adult is forty grains.

That it is given preferably in an alcoholic solution just before retiring.

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EDITORIAL.

PRESCRIBING OF PEPSIN.

Dr. R. G. Eccles, in a paper recently read before the Chemical Section of the Brooklyn Institute, stated that one-half of all the prescriptions which came to the drug stores containing pepsin also contained an alkali, thus destroying the efficacy of the pepsin. If this statement is supported by the facts, then a most lamentable ignorance exists among physicians as to the physiology of digestion. Will not some one of our readers investigate the matter for us, by going over the prescription books of some of the leading pharmacists of the city?

◆

DO CLERGYMEN AS A RULE PAY PHYSICIANS?

A suit recently brought by a Brooklyn physician against the estate of a deceased Catholic priest for medical attendance, has aroused a good deal of interest in the question: What is the practice of physicians as to making charges against the clergy? We confess that we do not know what the practice is in this regard. We believe, however, that it does and should vary, according to circumstances, just as it does with any other class of the community. The pastor of a feeble and struggling church, able to pay but a few hundred dollars salary, should not be charged for medical services unless he insists upon paying for them, and then the amount should be made small, but a clergyman who receives a salary of $5,000 or $10,000, should pay his physician as he pays any of his other obligations. The value of a clergyman to any community is no greater than that of the doctor, and as both must live on what they earn, so both must be paid. When the doctor receives free pew rent, then will be the proper time to discuss the propriety of the clergyman receiving free medical attendance.

TINKERING WITH MEDICAL LEGISLATION.

An effort is being made to amend the law requiring physicians who desire to qualify themselves for practice in this State, to be examined by a State Board of Medical Examiners. The law has, in our judgment, been already sufficiently amended by the exemption clause, which was passed by the Legislature of 1891. It is to be hoped that all who have influence at Albany will exert it to defeat the proposed amendment.

TYPHOID FEVER IN CHICAGO.

In the city of Chicago during the year 1891, there were 1,997 deaths from typhoid fever, representing probably 20,000 cases ; or, in other words, more than one-and-one-half per cent. of the total population were sick with that disease. In Brooklyn, during the same period, there were but 176 deaths, representing approximately 1,760 cases. In May of last year, 408 persons died of typhoid in Chicago, and in Brooklyn but nine. During the first twenty-three days of January of the present year, 219 deaths from this disease occurred in Chicago, and during the entire month but eight in Brooklyn. The Health Commissioner considers that the discharge of the river into the lake has much to do with the prevalence of the fever. The condition is certainly an alarming one, and it requires no prophet to foretell that unless radical measures are taken, few persons will dare to run the risk of contracting typhoid fever even for the sake of attending the World's Fair. The present condition of things in Chicago reminds one of the sanitary status of Philadelphia during the Centennial year, when the death-rate from typhoid was 9.36 per 10,000, almost identical with that of Chicago during 1890, 9.16 per 10,000, while during 1891, it reached the alarming proportion of 16.6. The problem becomes a more serious one when it is remembered that typhoid fever has been very prevalent in Chicago for many years, not always equally prevalent, but notably so during 1889, 1890 and 1891 while the records show that since 1880 it has been on the increase.

TYPHUS FEVER IN NEW YORK CITY.

The typhus fever, which was brought to New York by the passengers of the steamer Massilia, which arrived January 30th, is likely to prove more difficult of eradication than was at first supposed, hardly a day passing that some new victim is not reported. We gather from the newspapers that the disease has not confined itself to the emigrants, but that already one reporter and several sanitary policemen have been attacked. One of the best evidences of the efficacy of sanitary laws is to be found in the almost complete immunity which the City of New York has enjoyed from this scourge in recent years. The following table represents the number of deaths in that city for a long series of years :

1866	432
1867	189
1868	137
1869	125
1870	96
1871	65
1872	86
1873	39
1874	14
1875	28
1876	20
1877	17
1878	4
1879	4
1880	3
1881	160
1882	67
1883	15
1884	27
1885	15
1886	14
1887	0
1888	4

Since 1888 there have been no deaths from the disease until now.

In Brooklyn the disease is unknown, so far as our memory serves us, no case having occurred here in many years.

The disease has appeared in isolated instances among some of the passengers of the Massilia who have gone to other portions of the country.

Within a few days the New York World sent a reporter to North Brothers Island, where are situated the hospitals in which the patients suffering from contagious diseases sent from the city are treated. It is sincerely to be hoped that the condition of things reported as existing there, is greatly exaggerated, and until the investigation ordered by the New York Board of Health is completed, judgment should be suspended.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Regular monthly meeting of the Medical Society of the County of Kings, held at the rooms of the Society, No. 356 Bridge Street, Tuesday evening, February 16, 1892, at 8 o'clock P.M.

The meeting was called to order at 8.33 P.M., with Dr. Emery, the President, in the chair. There were about fifty members present.

The Secretary read extracts from the minutes of the last meeting, which was the annual meeting, stating that a full copy of the minutes would be sent to each member, and upon motion duly seconded, the minutes were approved as read.

REPORT OF COUNCIL.

The Council reported favorably upon the following applications: Drs. Joseph de Castro, Walter C. Wood, George A. Williams, Eugene P. Mallett and George H. Mallett.

The following applications for membership were received :

John W. Buell, Sheepshead Bay, L. I., Bellevue College, 1890 ; proposed by Dr. J. H. Raymond, and endorsed by Dr. J. H. McNaughton.

J. M. Clayland, 449 Pulaski Street, Ohio Medical College, 1884 ; proposed by Dr. J. L. Kortright, endorsed by Dr. Hutchinson.

A. H. Straub, 212 Meserole Street, Long Island College Hospital, 1889 ; proposed by Dr. Lawrence Coffin, endorsed by Dr. J. H. Raymond.

C. D. Napier, College of Physicians and Surgeons, New York, 1890; proposed by Dr. J. L. Fowler, endorsed by Dr. H. B. Delatour.

The Chair : The following having been regularly proposed are hereby declared elected to membership in this Society : Drs. Leon Louria, Rupert S. Royce, William L. Hunter, George S. Williams, Peter E. Kidd, Francis Peel, Marian Pyles, George T. Kemp, Phillip M. Jones.

SCIENTIFIC BUSINESS.

The first paper of the evening was read by Dr. Louis F. Criado upon the following subject : "Some remarks on pulmonary tuberculosis, with special reference to our most recent knowledge on the subject."

This paper was discussed by Drs. Van Cott, Evans, West, Bartlett and Henry.

The next paper was upon "Some Suppurative Conditions of the Skin following Prickly Heat," by Dr. Geo. D. Holsten.

This was discussed by Dr. Geo. T. Elliott, of New York, and Dr. Sherwell.

The Board of Trustees reported progress on the plan for a new building.

Dr. Raymond read his report on the subject of the Pan-American Medical Congress, and presented the following resolution :

Resolved, That the Medical Society of the County of Kings heartily endorse the Pan-American Medical Congress.

Resolved, That a Committee consisting of three members be appointed by the President to co-operate with the officers of the Congress.

On motion duly seconded, the resolution was unanimously adopted.

Dr. Pilcher, as a Committee of One on the banquet to be given to Dr. Colt on the attainment of the sixtieth anniversary of his active practice, reported that the banquet and reception would probably take place on the 17th of March, and stated that any members desiring to attend could communicate with himself or the Secretary and they would be provided with accommodation.

Dr. Mattison announced that he was inaugurating an excursion of physicians to the Bermudas, to sail on the 31st of March and return on the 14th of April.

Dr. Raymond :—I would like to have the privilege of calling the attention of the Society to the honor which has been conferred upon the Kings County Society by the State Society in the election of Dr. Pilcher as President of the State Society.

On motion the Society then adjourned.

W. M. Hutchinson,
Secretary.

THE BROOKLYN SURGICAL SOCIETY.

Tenth annual meeting, October 1, 1891.

President Dr. Fowler in the chair.

Reports of Treasurer and Council were read and accepted.

On ballot for officers, Dr. H. W. Rand was elected President, and Dr. H. Beeckman Delatour, Secretary and Treasurer.

Dr. Fowler was elected as member of council.

SCIENTIFIC BUSINESS.

Dr. Fowler reported his further experience with catgut sterilized by boiling in alcohol, and exhibited several convenient methods of preparing and preserving the same.

Dr. Pilcher gave a report of a case of appendicitis.

Fifty-ninth regular meeting, October 15, 1891.

The President in the chair.

SCIENTIFIC BUSINESS.

Dr. Terry read a paper entitled "Report of a Case of Compound Fracture of the Tibia," which introduced for discussion the treatment of compound fractures.

The efficiency of the present ambulance service and the methods of appointing ambulance surgeons was then discussed at length. A committee consisting of Drs. Burge, Fowler, Pilcher, Myerle and Rand was appointed to further consider the matter and to report to the Society.

Dr. Geo. R. Westbrook was nominated for membership.

Sixtieth regular meeting, November 5, 1891.

President in the chair.

Dr. Myerle read a paper entitled "Compound Fracture of the Cranial Vault, with report of two cases."

This was discussed by Drs. Burge, Lewis, Cochran, Fowler, Rand and Winter (on invitation).

Council reported favorably the name of Dr. Westbrook, and he was declared elected.

Sixty-first regular meeting, November 19, 1891.

President in the chair.

Dr. Rand presented a case of flexion of the fingers following a lacerated wound of the palm of the hand.

Dr. Wight read a paper entitled "Removal of the Arm, Scapula and a part of the Clavicle for Osteo-Sarcoma," and presented the patient upon whom he had operated.

These cases were discussed by the members present.

Sixty-second regular meeting, December 3, 1891.

President in the chair.

Dr. Walter M. Friend read a paper entitled "Embryology as Related to the Study of Anatomy."

The paper was discussed by Drs. Lewis, Burge, Pilcher and Delatour.

Sixty-third regular meeting, December 17, 1891.

President Dr. Rand in the chair.

Dr. Burge read a paper entitled "A Case of Traumatic Rupture of the Kidney."

This was discussed by the members present.

He then presented a case of obscure knee disease.

Sixty-fourth regular meeting, January 7, 1892.

Dr. Terry in the chair, in the absence of the president.

Dr. H. L. Cochran read a paper entitled "A Case of Amputation of the Left Arm and Right Forearm Simultaneously performed."

Discussion followed. H. Beeckman Delatour,
Secretary.

BROOKLYN PATHOLOGICAL SOCIETY.

At the March meeting of this Society the following was the order of exercises:

A paper upon Pathology of the Osseous System was read by Dr. W. N. Belcher, and illustrated by specimens from St. Catherine's Hospital Museum and Hoagland Laboratory.

After discussion the following specimens were presented with their respective histories: Fibro-Myoma of Uterus, Dr. J. C. Kennedy; Fatty Degeneration of Heart, with rupture at its apex, Dr. J. F. Kent; Cerebral Apoplexy, Dr. J. M. Clayland; Pediculated Fibroma of Uterus, Multiple Biliary Calculi, Tuberculosis of Ureter, Dr. E. H. Wilson.

The paper for the April meeting will be on Pathology of Lymphatic System.

THE KINGS COUNTY MEDICAL ASSOCIATION.

The April meeting will be occupied by a paper by Dr. H. C. Riggs on "The Treatment of Diabetes Mellitus," and also by a translation by Dr. L. A. W. Alleman of a paper by Dr. J. Hirschberg, of Berlin, on "Diabetic Retinitis."

All regular practitioners of medicine and medical students are invited to attend the meetings and participate in the discussions, and to remain as guests of the Association after the meeting.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

THE REMOTE EFFECTS OF INJURIES TO THE HEAD AND THEIR TREATMENT BY TREPHINING.

Tellier (Centralblatt für Chirurgie, 1891, No. 41). In fifty-four cases collected by T. and two hitherto unpublished, the author states that as far as could be demonstrated, the disturbances resulted from bony splinters, depressions, exostoses, etc., adhesions of the dura, the remains of former hæmorrhages, cicatrices after meningo-cephalitis and tumors (cysts, glioma). The symptoms are divided into those which relate to the motor, sensitive, sensorial and psychic spheres. Of these, those referable to the first named are the most likely to prove amenable to surgical interference, involving, as they do, the cortical centres. The sensitive and sensorial disturbances do not, as a rule, indicate trephining, unless associated with motor disturbances, the latter predominating. In cases of continued and circumscribed cephalalgia following traumatism, the author recommends trephining as a last resort. Disturbances of the psychic sphere in their milder forms appear as feeble-mindedness, loss of memory, incomplete or perverse mental development, etc. The more severe cases are characterized by evidences of grave pathological processes, such as general paralysis, epilepsy, and insanity. In cases of the first-named, if clearly following atrauma, operations may be resorted to at the site of cicatrices, fistulæ, localized cerebral symptoms and constant circumscribed tenderness. In general paralysis, surgical interference promises but very little; rather more in cases of insanity, if the history be clearly that of trauma, as shown by several reported successful cases. There can be no two opinions at the present day in cases of well-marked traumatic epilepsy. In a certain proportion of cases, as shown by one of the cases in Poncet's clinic at Lyons, improvement takes place at first and lasts for upwards of six months, and is then followed by a relapse to the former condition.

PARTIAL NEPHRECTOMY AND REUNION OF RENAL PARENCHYMA.

Tuffier (Archiv. Génér. de Méd., July, 1891). Renal cysts are frequently mistaken for ovarian cystoma. Of these, the unilocular are benign in opposition to the multilocular ones. In the former the renal parenchyma is sufficiently extensive as to leave no doubt as to the desirability of preserving the organ as functionally useful. Complete nephrectomy, it has been heretofore held, offers a better chance of recovery in these cases of renal cysts than incision. The discouraging results in this operation, however, led the author to institute a series of experimental studies (Gaz. Hebd., 1888, 1890, Archiv. Génér. de Méd., 1891), which developed the fact that hæmorrhage from the renal parenchyma may be controlled by compression of the vessels of the hilum and suture of the renal tissue. Such renal wounds heal readily and fistulæ are only observed to occur in cases in which the ureter has been injured. He therefore proposes to carefully dissect only the renal cyst, and to suture carefully the walls of the cavity in the substance of the kidney. This procedure was carried out successfully in a case communicated by T. After enucleation of the cyst the renal tissue was sutured by deep catgut sutures, the capsule being sutured separately, hæmorrhage ceasing as soon as this was accomplished ; no drainage was employed. The wound healed kindly. In this case an epithelioma of the bladder was subsequently removed by suprapubic cystotomy. The subsequent fate of the patient is not recorded.

THE RADICAL CURE OF HYPERTROPHY OF THE PROSTATE.

R. Eigembrodt (Bonn. Beitiäge zur klin. Chirurgie, Bd. viii). The following conclusions are reached in E's valuable paper : A radical operation for obstructive hypertrophy of the prostate is possible in the majority of cases, the method by supra-pubic cystotomy being the preferable one. An early operation is much to be preferred to a late one, although even in advanced cases some improvement may be expected by an operation. The condition of the bladder itself demands careful treatment following the operation. In case the obstruction to urination is found not to be due to a prominent or valve-like projection, but rather by a general enlargement of the prostate body, in connection with a sacculation of the bladder, provision for free escape of urine may be provided for by a deep cuneiform excision of the posterior portion of the urethral orifice.

CRANIOTOMY IN MICROCEPHALI AND IN UNDEVELOPED CHILDREN.

Lannelougue (Gaz. des Hôpitaux, 1891, No. 39). L. has performed craniotomy twenty-five times in microcephalic individuals and the imperfectly developed. He found in microcephalic skulls evidences of premature ossification of the sutures and diminished area of the fontanelles. Other observers have mentioned, as other operable causes of idiocy, injuries occurring during birth, notably compression of the skull, meningeal hæmorrhage of the convexity, leading to hæmatoma, circumscribed pachymeningitis and formation of cysts; and finally hyperostoses of syphilitic origin and general thickening of the bony vault of the skull. In the operation he has employed two different methods, the one consisting of linear and the other of flat incision. He now prefers the latter. Large portions of bone, either the shape of a V, of a rectangle, or of a T, are removed, the periosteum and skin flaps being then reunited, the area of bone measuring from eight to twelve millimetres. The operation lasted from forty to forty-five minutes. L. does not think it necessary to remove the periosteum, basing this upon an observation of two children operated upon who died two months afterward of croup. In these cases not a trace of bony regeneration was found. The ages of the children operated upon varied from eight months to twelve years. The operation was successful in twenty-four out of the twenty-five cases; one ended fatally from sepsis. In three other cases slight suppuration occurred. In the majority of cases both intelligence and gait were improved.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children, and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief of the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

OVARIAN PREGNANCY.

Makenrodt (Centralb. f. Gyn., No. 49, 1891) relates the following case of ovarian pregnancy: The patient was a woman, thirty-two years of age, whose menstruation had previously been normal. She presented herself for treatment on account of irregularity of menstruation, her menses not having occurred in seven weeks. Examination under an anæsthetic revealed a right-sided tumor the size of a goose-egg, of but moderate density. The curette brought away some thick, soft mucous membrane, which, however, was microscopically free from special decidual elements. In many places the connective tissue cells were greatly swollen. On the history and clinical facts the diagnosis of extra-uterine pregnancy was made. Ten days later a perceptible increase in size of tumor was noted. Severe pains and a rise of temperature to 39° C. led him to open the abdomen. There were extensive adhesions but the pedicle was small. The tumor was as he had supposed. On removal, it broke and poured out a quantity of fluid, blood and old coagula, into the abdominal cavity. The fœtus was not found. The patient made a good recovery. The specimen presented the following appearance : The tube was nearly normal for about two-and-a-half cm. from the uterus, then it swelled abruptly to the thickness of three fingers. Near the fimbriated extremity it resumed its normal size. The fimbriated end lost itself in a cystic tumor of the ovary, about the size of a hen's egg which burst at the operation. The ovarian tumor was easily separated from the tube, and everywhere showed true ovarian tissue, in which was embedded a corpus luteum of the size of a bean. The fimbriated extremity of the tube was spread over the upper part of the cyst. The probe passed without difficulty into the tubal sac which proved on incision to be a hæmatosalpinx. In the ovarian cyst, on the contrary, were found microscopic evidences of pregnancy. Placental tissue was made out in the deepest portion of the sac. The fœtus was wholly enveloped in a sac of ovarian tissue which was in no part a tubo-ovarian sac. The hæmatosalpinx was regarded as secondary to the death of the ovum.

REPRODUCTION OF THE UTERINE MUCOUS MEMBRANE.

L. M. Bossi (Br. Med. Jr., Nov. 7, 1891) gives the results of an experimental study on the reproduction of the uterine mucous membrane after curetting, and after the permanent application of caustics (Canquoin's paste). He first performed laparotomy on bitches and then scraped away the mucosa in the neighborhood of the cervix with a Volkmann's spoon ; in other cases the uterus was opened along its anterior surface, and different areas were completely denuded with a bistoury. In the cauterization cases sticks of Canquoin's paste were inserted into the cornua and allowed to project a little into the uterine cavity. After a varying number of days the animals were killed, the parts hardened in alcohol or in Flemming's solution, and sections made. Staining was done by alum and carmine, also by saffronine. Fifty animals were thus experimented on ; the results in thirty-five only are relied upon in the following conclusions : 1. The uterine mucous membrane of the dog removed from large tracts and in its whole thickness, is completely reproduced after a time together with true glands.

2. This reproduction may be in some cases a slow process from causes not yet ascertained. 3. The new epithelium is derived from that of the glands at the margin of the wound. 4. Finally, the reproduced glands arise by proliferation of cells of the new epithelium after it has become cylindrical. As regards caustics, Bossi comes to the conclusion that Tarnier and Polaillon, in their report made to the Paris Academy of Medicine in 1890, are in error in stating that they removed the mucous membrane in its whole thickness by caustics. They judged only from the expelled eschars and not from direct observation of the uterus. In all Bossi's cases there were incomplete stenosis of the cervical canal and complete stenosis of the cornua, and even signs of peritonitis. Microscopical examinations by the author showed the existence of an intense necrotic inflammation caused by the caustic, which not only destroyed the mucous membrane, but profoundly altered its glandular apparatus, so that it became impossible to say whether complete destruction would follow, or whether, a *restitutio ad integrum* being impossible, or difficult, grave chronic alteration would remain as the result. In contrast to this, in ten cases of removal of the mucous membrane, and in twenty other cases in which the uterus was laid open and the knife used, there were never any even incomplete stenosis, and never signs of peritonitis or grave inflammation of the uterine walls. Accordingly, Bossi emphatically asserts the superiority of curetting to the use of caustics left in situ, as regards both immediate and ulterior results.

PUERPERAL FEVER.

Döderlein (Arch. für Gyn., Bund 40, Heft 2). Puerperal fever epidemics in well-conducted institutions are to-day very infrequent. In the clinics of Gusserow and of Fritsch a short but severe puerperal epidemic was traced to the germs of diphtheria and angina, the proof of which was the presence of the cocci of both diseases. The Breslau epidemic lasted a long time.

A very severe epidemic visited the Leipsic clinic in September, 1891. Three puerperæ were attacked and one died. From the 1st to the 25th of September, of fifty cases delivered, forty (or eighty per cent.) had a perfectly undisturbed child-bed ; nine (or eighteen per cent.) showed for one day a slight temperature elevation over 38°. Only one had fever for several days, and she was dismissed on the 25th. To show the condition of the institution before the epidemic the author states that in four hundred and sixty-six births immediately preceding the epidemic, convalescence was normal in 81.6 per cent.

On September 25, the assistant midwife serving on that day examined three patients. All these patients became very ill. This pointed to the midwife, and as she had only the lying-in-room service to perform, and had only a few hours earlier examined a case that remained perfectly well, it was certain she had gotten the germs from the patients themselves. It was found that the first patient wore a glass eye which she afterward said had not been removed in half a year. After removal it was found to be broken, the sharp points had burrowed into the conjunctiva of the lid causing deep ulcers, which had produced severe inflammation over the conjunctiva.

Zweifel believed that here was the source of the infection.

[The midwife's instructions were to brush the hands in warm water and soap for five minutes, to rinse in clear water and brush again three minutes in a 1-2000 warm acidulated sublimate solution. As the midwife had observed these directions, the experience goes to prove that infected hands cannot be made safe with a single disinfection, or that the rules had been observed in a merely perfunctory manner.—J.]

The infected fluids of the eye as well as the peritoneal exudation contained streptococcus pyogenes and staphylococcus pyogenes aureus.

The temperature in all these cases rose on the fourth day to 39°, 39.7°, 40° C. In all the puerperal fever was of the lymphatic form. Speaking of the treatment of puerperal fever, the author remarks that the first step in the therapeutics is intra-uterine irrigation. Fritsch, in the International Congress, strongly advocated this procedure. There are to-day very few who do not endorse this method of treatment. All depends, however, on early resort to irrigation before the micro-organisms have migrated into the lymph canals. He takes exception to the views of Fehling, who would in the presence of a puerperal endometritis first irrigate the vagina, having recourse to intra-uterine irrigation only on failure of the vaginal injections to relieve it. It is much better, Döderlein contends, to closely watch the temperature, and on the first rise to resort at once to intra-uterine irrigation. A few hours later it may be useless. The lochia should be examined for bacteria and the kind of bacteria. Only when micro-organisms are present are we justified in considering this infection as the cause of the fever, and the subsidence of the fever as the result of the disinfection. A definite time after the irrigation the uterine lochia should be again examined microscopically and by culture-tests to ascertain whether the injection has succeeded in its object.

The writer's experience is not favorable to the use of the curette. In the Leipsic clinic from 1887 to 1890, of 2,674 patients delivered, two died of puerperal fever, 0.77 per cent. under douching. In Vienna, of 7,600 patients, 0.28 per cent. died of puerperal processes. As the result of curetting, two of every ninety-eight cases died.

The use of baths, he thinks, is contra-indicated in peritonitis, since limitation of the peritoneal inflammation is the only hope and this result is hindered by anything which disturbs the complete rest of the peritonæum.

Opium, on the other hand, is indicated to control peristalsis. Ice-cold applications to the abdomen are also recommended. Alcohol may be given only after vomiting has fully ceased.

Antipyrin, antifebrin, salicylic acid and quinine he regards as useful, not only for their antipyretic but also for their germicidal effects.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

PYOKTANIN INJECTIONS IN CARCINOMA OF UTERUS.

Boldt (Merck's Bulletin for January, 1892), says: Pyoktanin possesses great germ-destroying power, and is devoid of injurious effects on the animal economy if used with proper precautions. He quotes a case, Backmaier (Wiener med. Presse, 1891), where there had been hæmorrhage from the vagina for more than three months, uterus immovable, with parametric-infiltration involving anterior vaginal wall.

The injection, one-and-a-half to three syringefuls of a one-to-one hundred solution in different portions of the growth every second day for four months, resulted in disappearance of the anæmia: the ulcerated surface was even and covered with healthy granulations; the discharge was scanty and not bloody or ichorous; the infiltration had diminished, and the ulcer on vaginal wall was partially healed.

Four months subsequent to this improvement was steadily progressive.

B. also gave reports of four cases of his own. The women were from forty-two to fifty-three years of age and all had been bleeding irregularly from two to three months. They were emaciated, having intense pelvic pain—the anterior vaginal walls were more or less infiltrated ; the vaginal portion of the cervix of all was nearly destroyed, and other recognized diagnostic evidences of malignancy were present. The treatment was thorough curetting, followed by a tampon of dry iodoform gauze. In one case the Paquelin cautery was required to stay hæmorrhage. After forty-eight hours gauze was removed, patient placed in Sims' position, parts dried and injection again used, care being taken to reach the deeper structures, with effort to keep the parts as thoroughly clean as possible, this treatment, with some modifications, is continued. The injection usually causes pain for half an hour.

Confident views are expressed that proper treatment by this drug will prolong life and alleviate suffering, and in some cases, perhaps, complete a cure, when the disease does not admit of radical surgical treatment. The hypodermic use of pyoktanin should not exceed grs. iiss. Hoge, in Virg. Med. Monthly, October, 1891, reports a case of failure, but B. alleges the remedy was used insufficiently, or that the solution might have been unstable.

"THE GRAVEYARD REHABILITATED."

"H. A. K."—(doubtless, Kelly, of Baltimore) in a review of "Sterility in Women," by Edis, of London, regrets that the title page bears date of '90 rather than '60.

"The fact cannot be too much emphasized that the treatment of sterility in women should begin in a large number of cases with the male and this must never be forgotten in a single instance.

"The metrotome is a useless and a dangerous weapon, belonging exclusively to the gynæcology of a past generation ; it ought never to be figured in any modern text-book, except as a curiosity.

"In the use of sponge tents the antiseptic precautions are better expended on the tent in its preparation than on the uterine canal after its removal, the irrigation of an infected surface, particularly when it contains crypts, with an antiseptic solution, is useless.

"The cure of anteflexion by intra-uterine stems is ancestral pathology and treatment.

"Cellulitis and parametritis are among the gynæcological varieties, and are not to be mentioned parallel with salpingitis.

"Cutter's stem-pessaries are to-day found in the lumber-rooms of hospitals and back in the dusty corners of old closets more frequently than in the hands of competent gynæcologists."—Therapeutic Gazette, January, 1892.

WHAT IS TRENDELENBERG'S POSITION IN GYNÆCOLOGY?

Krug (Annals Gynæcology et Pæd., December, 1891). "The Trendelenberg's posture is the elevation of the patient's pelvis, so that the symphysis pubis forms the highest point, while the body is at an angle from the horizontal of from forty-five to sixty degrees. The advantage of this position in abdominal surgery is that the contents of the abdominal cavity are drawn toward the diaphragm, and the true pelvis thus becomes free and of easy access. Protrusion of the intestines during laparotomy—a most trying and unpleasant occurrence when the patient is in horizontal position—is impossible in Trendelenberg's posture. The pelvic viscera are easily visible, as in an anatomical demonstration; all operations on the same can be conducted under control of the eye; the operator can see everything he is doing; the ureters can be seen and easily avoided; any bleeding point is at once recognized, and easily tied, even in the depth of the pelvis."

PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital.

EFFECTS OF TIGHT-LACING.

Symington (Edin. Med. Jour.) gives the particulars of a post-mortem examination upon the body of a woman aged fifty, five feet six inches in height, who had worn for many years very tight-fitting corsets. The thorax was constricted, the greatest decrease in the circumference being about two inches above the crests of the ilium. At the fourth rib the circular measurement was twenty-seven inches; at the eighth rib it measured sixteen inches. The cartilages between the fourth and eighth overlapped somewhat. The liver was pushed inwards, there being a depression on the lower and outer surface of the right lobe. The tenth rib fitted in this space. The gall bladder projected below the liver. The left lobe was well to the left side. The stomach showed a well-marked constriction in its middle with an increased circumference, or pouch-like cavity, just below it. The intestines were in an abnormally low position, the jejunum and ileum being in the pelvis. The kidneys were *firmly fixed*, the lower edge being just above the iliac crest. The spleen was in its normal position.

[*Note.*—The above brief account of the post-mortem examination, the record of which was made, no doubt, to show the ill effects of wearing tight-fitting corsets, may serve, however, to prove that the evil effects of lacing are greatly over-estimated.]

The various organs of the body, for the sake of this illustration, may be divided into *active and passive working organs*. The active working organs are those that move ; whose position is constantly changing, depending upon functional activity and the exercise of the body. The abdominal cavity has abundant moving room for those organs which have a lax attachment. The thoracic cavity has a relative moving room of good proportions, made by the easy descent of the diaphragm. Should pressure, in the way of constriction, be brought to bear on either of these cavities, it is quite certain, judging from anatomical attachments and physiological laws, that there will be a natural compensation for the space employed. After the linear incision has been made and the sternum removed in a post-mortem examination, two facts will become apparent. The first is that there are many positions that organs may assume which cannot be detected upon examination, and which give rise to no symptoms. The second is that the active working organs may be put in strange positions without causing change, by pressure, to any great degree in the stationary organs.

In the living body the *bladder* may rise well into the abdominal cavity ; the *intestines* may become distended with gas ; the *kidneys* may be enlarged by parenchymatous disease to a weight of ten or twelve ounces ; the *stomach* may be filled with large quantities of solid and liquid food ; the *spleen* may become greatly enlarged in enteric fever ; the *liver* may be hypertrophied ; the *lungs* may be filled with air, which may be held for a considerable length of time. All of these conditions frequently occur either without personal knowledge, or discomfort, or bad effects in the way of pressure.

Tight-lacing, to be an abnormal condition, must give rise to symptoms and signs. In the vast majority of cases it does not do so. In the above case the position of the liver was changed, but it must be remembered that the hepatic attachments are lax. A distended gall-bladder is frequently found below it. The intestines were low down. In a woman of fifty-five the pelvic organs are small. Increase of space would be in the cavity. Moreover, the intestines are freely movable and sometimes are congenitally small. There was a constriction in the stomach, but the dilatation came below it. The heart had, therefore, abundance of working room. It is natural that the spleen was found in a normal position. That organ lies on tissues below it, not surrounded by them. When pressure is brought upon it, the organ simply moves with these tissues. The kidneys were *firmly fixed*. This is the weak point in the report. Movable kidneys are rare. Pressure sometimes does move them, but they rarely become fixed in new positions. In a post-mortem examination made by the writer there was found a liver of malignant disease weighing one hundred and ten ounces. Pressure on the right kidney had caused it to descend, but it was movable in a mesh-like net of connective tissue, the stretching of its attachments. In certain positions of the body it could fall back to the upper part of this net, or its original and normal position. So, in this case of tight lacing, if pressure had caused the kidneys to descend, sometime during the twenty-four hours, when there was a relief from all pressure, the kidneys would have returned to their normal positions, as the tissues working their attachments have a certain elasticity.

Tight-lacing is common. Diseases from it are uncommon in an an equal proportion. It is a question, therefore, if the wearing of stays produces the evil effects that are so commonly stated.

H. C.

CONDITIONS OF CURE IN TUBERCULOSIS.

Burney Lee, of London, admits the curability of consumption, believing it to be proved by the findings of arrested lesions in the bodies of those dying from some other disease, and by clinical experience. The first condition of importance is early detection. The author believes that months and years may pass, during which time the aggregation of tubercular masses has been going on, giving no evidence of their presence.

Early occurrence of hæmoptysis is favorable and may aid in establishing a cure, as it may call attention to the lungs, which otherwise giving no evidence of disease might not be examined.

Mention is made of the presence of dry pleurisy at the apex, not always meaning tuberculosis. This frequently is of rheumatic origin. With it there are other manifestations of rheumatism—pain in the part, absence of fever, and wasting, and the good effects of anti-rheumatic remedies.

The development of fibroid material is the natural method of cure and is always desired.

The absence of tissue sensibility has an influence on the cure. Some tissues yield, while others seem to combat the disease. A weak vaso-motor system is unfavorable.

The presence or absence of heredity is important.

The way the bacilli enter the body affects the chances of a cure—though the blood vessels or lymphatics renders the prognosis more grave.

A somewhat novel condition is given in the strength of the bacilli. The discussion of this is most interesting. Weak bacilli from a case where fibroid material is in abundance, when acting as the infecting means, would not be so virulent as bacilli coming from a case where great activity of the destructive processes was present.

Climate, hygiene, manner of living, treatment, etc., etc., are mentioned as conditions.

OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

Assistant Surgeon, Brooklyn Eye and Ear Hospital.

THE ORIGIN OF INFLAMMATION AND THE ACTION OF AGENTS EXCITING IT.

(Concluded.)

The fifth and last division of Leber's comprehensive work is devoted to the further consideration of the manifestations of inflammation and the action of phlogogenetic substances. He first considers the effect of purely mechanical influences unaccompanied by any remaining foreign body, so that the chemical action of the foreign material could be excluded. Irritation by rubbing, blows, or scratches produced ocular hyperæmia and the regeneration of possible losses of substance. This hyperæmia is the result of the direct action of the mechanical irritant upon the blood vessels, and not due to reflex action. Moderate mechanical injury of a non-vascular tissue will not excite inflammation directly, and when such inflammation occurs it is due either to a coincident injury or irritation of neighboring vascular tissue, or to the presence of foreign material in the wound. After injury accompanied by crushing or bruising of tissue sufficient to produce necrosis, inflammation will be produced by the products of that necrosis even without the action of microbes.

Next follows a consideration of the inflammation produced by finely powdered insoluble (?) substances. None of those used, no matter how insoluble and chemically indifferent, proved itself inert in the interior of the eye. All excited, if only to a slight degree, some inflammatory reaction, hyperæmia, albuminous and fibrinous exudation, emigration of leucocytes, and development of new blood-vessels. The fine division of these substances, cinnabar, gold, platinum, barium sulphate, silicic acid, graphite, etc., considerably increased their activity, doubtless by increasing the area of surface capable of acting upon and of being acted upon by the ocular tissues and fluids. One must believe this phlogogenetic action of ordinarily insoluble substances, as before stated, to be due to their actual though slight solubility, which is naturally increased by their pulverization. The probably chemical action of these substances is confirmed by the fact that their action is the same even when they are enclosed in tiny glass tubes and thus introduced into the anterior chamber kept from all direct contact with the tissues.

The migration of leucocytes is then considered at some length and found to depend upon an inherent power of attraction possessed by the phlogogenetic substance, a chemotaxis similar to that attraction which certain chemical substances have for vegetable cells. All of Leber's experiments confirmed Cohnheim's theory that pus corpuscles, aside from a slight possible multiplication by division, appear in the tissues solely as the result of an emigration from the blood vessels, and not from an active proliferation of the connective tissue cells. Proliferation of these cells may occur, but does not result in the formation of leucocytes, but rather, granulation tissue. Such proliferation cannot be regarded as exclusively a regenerative process, but may also occur in consequence of the irritation produced by the phlogogenetic substance. In this respect, Leber's views differ from those of Cohnheim. The cornea plays a passive part in these processes, as is shown by various experiments, among them the introduction of a dead cornea into a living body, the same infiltration with leucocytes occurring at the wound and at the periphery of the cornea as is seen in the living eye.

The leucocytes once in the tissues, are then attracted toward the substance, exciting inflammation by chemotaxis, and it remains to be seen why they emigrate from the blood vessels into the tissues. That chemotaxis may also be a factor here, cannot be denied, since the material which influences the movements of the leucocytes undoubtedly enters the blood vessels by diffusion and would act, it is but reasonable to suppose upon the leucocytes in the vessels, especially such as rested outside the blood column, in the same way as upon those already emigrated. Indeed, numerous experiments demonstrated that the leucocytes are attracted from circulating blood by phlogogenetic agents introduced into the vessels, and Leber, while not denying the influence of blood pressure and dimnished resistance of the vascular walls as favorable to cell emigration, says that the actual cause of such emigration is to be sought in the condition which excites the latent mobility of the leucocytes and determines the centrifugal direction of their movement.

Attention is next given to the source of the pus in the anterior chamber in cases of hypopyon keratitis. This pus is due to emigration of leucocytes from the vessels at the angle of the anterior chamber and in the iris, and in the early stages at least is quite free from microbes, showing that it is caused not by the microbes themselves, but by the phlogogenetic substance produced by them. The inflammatory products found in the anterior chamber do not come from the cornea, as has been maintained, either by diapedesis or by the rupture inward of a so-called corneal abscess. Indeed, a real abscess of the cornea does not exist, as Horner has already shown, and what has been called such is either an ulcer or an accumulation of exudation on the posterior surface of the cornea and not between its layers.

The last three chapters of this remarkable work are devoted to the tissue proliferation resulting from inflammation, the purulent softening of tissue, which may be regarded as a chemical process similar to digestion dependent upon the leucocytes, and finally, to the purposes served by inflammation. This last chapter is such a fine *résumé* of the whole subject, that one is tempted to act as translator rather than reviewer. This, however, space will not allow, and one can only say that in the perusal of this masterly work each chapter brings an added admiration for its gifted author and an added appreciation of his patience and genius.

DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

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THE VOICE AND ITS TREATMENT.

A. G. Hobbs (Jour. of Laryngol. and Rhinol., Vol. V., No. 11). This is a discussion of those pathological conditions of nares, nasopharynx and pharynx, which result in voice defects, especially such as would prove of danger to public speakers and singers.

Enlarged and degenerated tonsils affect the resonance, the register, or the resistance of the voice.

Very moderate tonsillar hypertrophy, in singers, will cause inability to reach and hold the higher tones, and the voice will rapidly tire, owing to a change in resistance.

This calls for active interference, therefore, when the tonsils are enlarged sufficiently to press upon either the anterior or posterior pillars of the fauces, or to project beyond their level, tonsillotomy should be performed. To do this it may be necessary to raise the tonsil with vulsellum. The blunt-pointed bistoury is advocated. Care must be taken to render the cut surface perfectly flat. The galvano-cautery is next preferable instrument, but it will not leave so smooth a surface as knife, and causes harder cicatrix. The tonsillotome generally bruises the stump, and it is difficult to remove the growth below the level of edges of faucial pillars, which should be done.

The cautery point is advocated only in those cases in which faucial pillars are very prominent, and tonsil is infiltrated with cheesy secretion.

The cold snare is a painful method and frequently enucleates, which is not as desirable as amputation.

Nasal stenosis is the most common cause of voice defects of resonance. The perfection of resonance or of register cannot be attained if *any* obstruction exist in the nose. If the passage of the nares be irregular, or misproportioned, the full voice-development cannot be reached.

Slight stenosis produces flattened tones. Marked stenosis produces decidedly muffled tones.

Deviations of septum are most serious cause of nasal stenosis. It is of the greatest importance to preserve as much of the nasal mucous membrane as is possible in corrective operations.

The author prefers a nasal saw, having teeth cutting in both forward and backward motion, to cautery, drill, chisel or gouge.

In every possible instance the cutting should be from below upward, the sawing should cease as soon as cartilage or bone is cut through, and the ablated piece removed without severing superior attachment of mucous membrane. The membrane should be smoothed down and gently held in place by plug of antiseptic cotton.

Turbinated hypertrophies affect voice resonance in direct proportion to their size. Their reduction is advocated by cautery or by chromic acid.

The author uses latter by making it into a paste with glycerine. This is applied by cotton carrier, after cocainizing part. The surface is then wiped with cotton until perfectly dry. This chemical should not be used when the turbinated tissue is sufficiently enlarged to form contact with septum.

In using cautery point, it should be introduced near the most prominent part of hypertrophy, and slanted in until the bone or cartilage is reached, then advanced to far extremity of base of enlargement. The point should be withdrawn while heated, the point of exit being same as entrance; in this way the minimum destruction of membrane is effected.

Pharyngitis and *laryngitis*, except the acute, very generally have their origin in nasal and naso-pharyngeal inflammations.

While treatment of chronic affections is proceeding, a moderate use of voice is preferable to complete rest, ceasing before voice-weariness occurs.

The middle registers alone should be used, and singing or speaking in open air should be strictly prohibited.

During the surgical treatment, spraying the nose and throat with one of the neutral petroleum products is a most valuable adjuvant. Oil terebene or other mild stimulant may be added to encourage a normal secretion; the glandular functions being generally perverted by gravitations from above.

The use of aqueous solutions is deprecated, except for cocaine and bichloride of mercury and other chemicals which are but sparingly soluble in oil. Always the specific gravity of solution used should be as nearly as possible that of natural nasal secretions.

Excessive wrappings about throat should not be allowed, attention should be directed rather to protection of feet, since their sudden chilling causes more nasal and laryngeal troubles than exposure of the throat.

CROUPOUS RHINITIS.

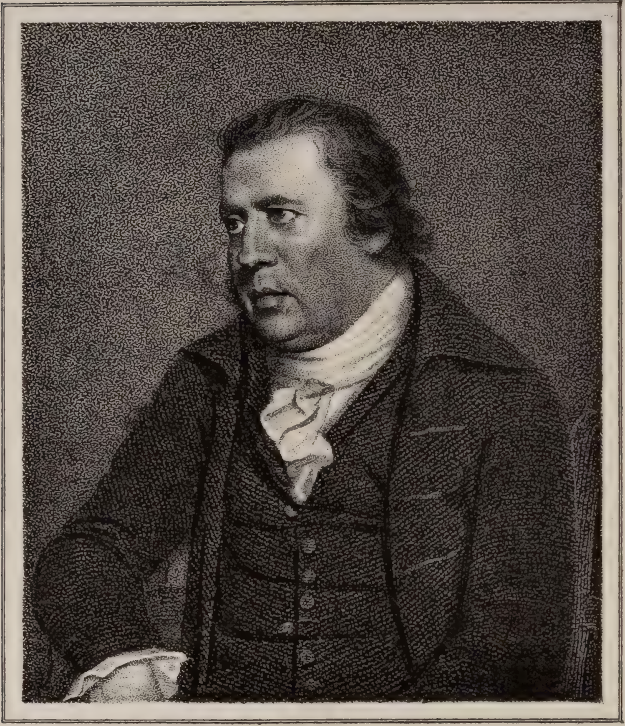
M. Hunt. A report of a case before the British Laryngological Association. The initial symptoms were profuse, serous discharge from one nostril, with marked obstruction. Slight rise of temperature, 100° F.

The occluded nostril was lined with thick, white membrane. The mucous membrane of opposite side swollen and congested but without deposit. The deposit was removed easily, leaving a raw surface that bled slightly. The following day same deposit found in nostril, also on surface of faucial tonsils. The latter did not bleed on removal of exudate.

After removal, the denuded surface was brushed with sol. of argent. nitrat. (twelve per cent.). The membrane disappeared on fifteenth day from commencement of attack, and was followed by free muco-purulent discharge, lasting for ten days.

By microscope, the exudate consisted of basement of fibrin, fibrillous and granular, leucocytes and epithelial cells.

The absence of any nasal traumatism, of constitutional disturbances, of renal symptoms, and of diphtheria in surroundings, is the warrant for the diagnosis.



WILLIAM SMELLIE, M.D.

While the Chamberlens undoubtedly invented and used the obstetric forceps, it is to Smellie that *we* owe this exceedingly useful addition to our armamentarium ; for the various obstetric forceps of to-day are but modifications of those used by William Smellie 150 years ago.

The Smellie lock and the Smellie short forceps still remain unchanged, and the fact that Smellie does not get the credit for giving us the long forceps with the pelvic curve, is due to his not being in his early life a writer, and not describing his long forceps in print till 1751, while Levert had published his description four years previously, although it is acknowledged that Smellie used them and exhibited them to his students several years previously. He recommends that the blades be covered with thin, soft leather, which he says "may be easily removed when there is the least suspicion of venereal infection in a former case." It is said that at one time he made experiments with forceps made of wood, and as he says, with success.

To him we also owe the almost universally used perforating instrument known as SMELLIE'S scissors, and the crochet. He also made use of a pair of crochets, joined and curved like the obstetric forceps for the extraction of the dead fœtus.

Dr. Smellie was the first writer who considered the shape and size of the female pelvis as adapted to the head of the fœtus. From comparing them together, assisted by observation in practice, he demonstrated that "in natural labor the vertex, or crown of the head, first enters the brim of the pelvis, one ear of the child being turned towards the pubes, the other to the sacrum ; but that when the head has passed through that strait it makes a half turn which brings the forehead into the hollow of the sacrum, where the vertex rising, opens the os externum."

An opinion had prevailed from the time of Hippocrates that the fœtus is placed in the uterus in a sitting posture, and that about the eighth month, or, as some authors taught, at the commencement of labor, the head is forced down by the contractions of the uterus. But Smellie observing that at whatever period the fœtus was extended it generally came head first, he was induced to consider that as the natural position of it in utero. He also gave several ingenious observations on "touching" and describes the gradual obliteration of the cervix-uteri, and of the rising of the fundus in the abdomen. He describes the complete obliteration of the cervix at full-term and gives it as a sign by which one may distinguish between threatened labor or false pains during term, or true pains at the completion of gestation.

In 1752 he published his lectures, having spent, as he says, six years in digesting and improving them, under the title of "A Treatise on Midwifery," in one volume 8vo. This was followed in 1754 by a volume of cases intended to illustrate his methods of practice He intended following this with a second volume, which was delayed however, until 1768, five years after the author's death.

In 1754 he published that monumental work, his set of anatomical plates with explanations and an abridgment of his "Practice of Midwifery," with a view to still further illustrate his treatise on that subject. These large folio copper-plates, thirty-six in number, are of the size of nature and principally taken from subjects prepared for the purpose. It has been asserted that but eighty impressions were taken from these plates.

Smellie was principally celebrated as a teacher, having instructed, as he informs us in his practice, nearly 1,000 pupils. He has been accused of degrading the profession by teaching midwifery at a very low price, and giving certificates to pupils who had only attended him a few weeks. It is said that he advertised to give "a universal lecture on midwifery for half a guinea, or four lectures for a guinea." In these universal lectures the whole mystery of the art was to be unfolded. It is said that a transparency hung over his door with the words "Midwifery taught here for five shillings."

We suppose that having practised for nineteen years before coming to London, in a small town in Scotland where small fees were the rule, he did not appreciate how insignificant and inadequate they were when he came to reside in the metropolis. He is said to have been coarse in his person and awkward and unpleasing in his manners, so that he never rose to any great estimation as a popular practitioner He had an active and ingenious mind with a solid understanding and judgment, with a peculiar turn to mechanics; all of which is shown by his writings and his instruments.

He died in 1763, at an advanced age, in Lanark, Scotland, whither he had retired a few years before. after a long and successful practice of the obstetrical art.

J. H. H.

OTOLOGY.

BY J. E. SHEPPARD, M.D.,

Assistant Surgeon, Aural Department, Brooklyn Eye and Ear Hospital; Instructor in Diseases of the Ear, New York Post-Graduate Medical School and Hospital.

THE FUNCTIONAL IMPORTANCE OF THE COCHLEA.

Corradi (Archiv. f. Ohrenheilkunde, B. xxxiii., H. 1.) sums up his conclusions from an experimental study of this subject as follows: 1. That in the human labyrinth, other portions besides the cochlea exist where acoustic impressions can be received, is not as yet demonstrated. In guinea-pigs, after complete destruction of both cochleæ, total and permanent deafness is observed. 2. Partial injury to both cochleæ does not necessarily lead to complete and permanent deafness; on the contrary, it sometimes occurs that, either immediately after the operation or after a little time, the hearing power returns, owing to the remaining uninjured parts. In such cases the temporary impairment of hearing must be attributed to shock, to loss of blood, or to the reactive inflammatory disturbance. The objection which may perhaps be raised that, because, after injury of both cochleæ, a certain degree of hearing may remain in many cases, other parts besides the cochlea should exist in the labyrinth where sound impressions are perceived, C. considers unfounded, since in the first place, as his experiments show, all hearing is lost if, instead of partial, complete destruction of both cochleæ is caused; and secondly, because, in those cases where after injury some hearing remains, the degree is usually very variable. Were this due to other portions of the labyrinth and not to the uninjured remaining parts of the cochlea, it should exist not only in all cases of total or partial destruction, but its degree should always be the same. Thus it becomes easy to explain those cases where slight hearing has been observed after partial throwing off of the cochlea. 3. It is very probable that the perception of different tones, according to their pitch, takes place in different parts of the cochlea, and the deeper the tone the nearer to the apex is situated the part of Corti's organ by which it is perceived.

TUBERCULOSIS OF THE EAR.

Krepuska (Orvosi Hetilap, No. 37, 1891,) reports two interesting and noteworthy cases. In one case existed, in all probability, a primary miliary tuberculosis of the membrana typani, with a closely following caries of the temporal bone. In the second case syphilis had produced great destruction in the nose and naso-pharynx; the bilateral ear-disease, on the contrary, was caused by tuberculosis. The diagnosis was confirmed by microscopic examination. In neither of the cases could the writer discover tubercle-bacilli in the pus from the ears, but in the second case he found numerous bacilli in the secretion taken from the nasal cavities with a probe. Quite as positive was the finding in portions of polypi removed from the ears in both cases. K. deducts from his experience the following conclusions: 1. Tuberculosis of the ear may present several forms. 2. Tuberculosis of the ear is by no means so rare a disease as the text-books and statistics indicate; rather should all the torpid ear diseases, and particularly those extending to the bone, arouse suspicion in this direction. 3. By appropriate microscopic examination a great part of the disease-group known as "otitis media suppurativa" can be separated into several subdivisions of importance as regards both therapeutics and prognosis.

IMPAIRMENT OF HEARING IN RAILROAD EMPLOYEES WITH REFERENCE TO THE SAFETY OF THE TRAVELING PUBLIC.

Lichtenberg (Monatschrift f. Ohrenheilkunde, etc., Nos. 11 and 12, 1891,) gives in some detail the results of an examination of 250 railroad employees, engineers, firemen, conductors, etc. Of these he found 92, 36.8 per cent., suffering from disease of the ear, of which 58, 23.2 per cent., presented more or less impairment of hearing. He then instances cases where railroad accidents have been proved to be the result of defective hearing of the engineers, and questions very pertinently how many of the railroad accidents, for which no cause can be found, may be due to this same trouble. In closing, L. says, "that in consideration of his findings, and in the interest of the public welfare, he considers it his duty to lay before the Hungarian government the following conclusions: 1. In locomotive engineers and firemen occurs sooner or later a disease of the ear, usually bilateral, attended with considerable impairment of hearing, the same being due to their occupation. 2. This acquired hardness of hearing appears, with regard to the signal regulations, more dangerous than color-blindness, since in the latter it depends upon a congenital condition, which can be accurately determined before such a one enters the service; in the former, on the contrary, the result is due to a slow, insidious, acquired disease, often unknown to the sufferer, and often only discovered by accident, when for example, from a cold or injury, the hearing upon one or both sides is still further diminished, or completely lost. 3. As the accompanying tests have shown, the ears of Hungarian railroad employees are frequently diseased. Continued investigations may perhaps change these results; the fact, however, in itself is positive and without doubt. 4. Examination of the ears should be made with the greatest care before permitting entrance to the service, and only by a physician who has thoroughly studied ear diseases, since the testing, particularly as to the function, is difficult and complicated, and because, as is the general custom, with watch and speech, the actual hearing cannot be determined. 5. In making an appointment to the service, it may be practicable to call the attention of the engaged to the fact that an impairment of hearing from the occupation is possible, and to stipulate that he shall report it if he notices the slightest tendency in this direction. 6. To avoid danger, an examination of the ears of all employees seems indicated at least every two years."

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CHILDREN AND THEIR DISEASES.

BY FRANCIS H. STUART, A.M., M.D.

PROPHYLAXIS AGAINST NEPHRITIS SCARLATINOSA.

Dr. Ziegler (Berl. kl. Wochenschrift, Jan. 11, 1892, p. 25) refers to the value of milk diet in the treatment of nephritis, especially in its acute form, and that in children it is very easy to carry out this line of treatment. Henoch, Senator, and Baginsky are each quoted in support of this statement. Dr. Ziegler gives the results of his experience and observation for a period of six years as physician to the Military Orphan Asylum at Potsdam, during nine epidemics of scarlet fever. In uncomplicated cases, his reliance was entirely upon a milk diet and rest in bed, in order to avoid catching cold. The favorable results led him to use it as a prophylactic against the development of nephritis during and after scarlet fever. Milk acts as a gentle diuretic and is at the same time a nutritious diet, which can be said of no other means at our command.

His mode of treatment is as follows: At the beginning of the attack, when there is high fever and loss of appetite, the milk is diluted with seltzer or soda water. This, with water gruel, comprises the only treatment in uncomplicated cases. After a few days, when the desire for food returns, zwieback or rolls are given with the milk. The amount of the milk is only limited to the appetite of the patient—sometimes one-and-a-half to two liters being taken in twenty-four hours. This diet is continued till the end of the third week, when other nourishment is gradually added. No statistics from his private practice are given, for the reason that he felt that they would not be reliable, as the patients could not be under absolute control. The study of the orphan asylum statistics covers the period from 1875 to 1892. In the nine epidemics there were 218 cases of scarlet fever; 115 cases occurred before the introduction of the "milk-diet treatment." More than half of these had kidney complication during or following the acute disease. And it is farther recorded that many of these cases were of an extremely light form. In the second category there were many cases of great severity, some of which died in three or four days, but there was no development of renal complication during the stay of the patients in the hospital.

In private practice he found it difficult to confine patients to an exclusive milk diet, as they soon grew tired of it. In such instances he allowed farinaceous food with the milk.

[I have employed this method in several cases with the most satisfactory results. By combining farinaceous food with the milk early in the course of the disease, as soon as the patient begins to desire to eat, I have not met with difficulty in carrying out the principle. It is advisable to keep the bowels open at least every other day, preferably with small doses of soda and calomel.—F. H. S.]

TREATMENT OF DIPHTHERIA.

Dr. Concetti (Archiv. f. Kinderheilkunde, No. 14, p. 125) refers to the proof by Loeffler, Roux, Yersin, and others, that diphtheria is an infectious baccillary disease in which the micro-organism causes a local affection, with systemic infection resulting from intoxication (poisoning) by leucomaines produced by the bacillus. From his clinical and experimental studies, he thinks that as yet we have no means of rendering the bacillus instantly innocuous, that is, at the site of infection. Neither is there any remedy for destroying the diphthero-toxine. Hence he advises free and frequent washing of the throat and nasal passages in order to prevent absorption. For this purpose he syringes these passages with a weak solution of boric acid. Boric acid antagonizes the diphtheritic poison. This line of treatment is to be energetically pursued, washing the surface every two hours, day and night. It is easily employed and is less disagreeable to the patient than any other local treatment. After a few irrigations the symptoms of general infection disappear and the disease remains local.

[On the recommendation of Dr. Jacobi I have used this method of treatment for several years with very decided benefit. It is best to employ a nasal syringe (with a nozzle which will *fill* the nostril and so compel the fluid to go out by the opposite one and through the mouth). The prescription I have used is the following:

℞
Hydrarg. bichlorid ....gr. iiss.
Sodii chlorid ....ʒii.
Aq. destilat...........................Oj.

S. To be used with a nasal syringe every hour of the day, and every two hours at night.

A syringeful—an ounce—should be used in each nostril at every treatment. If the patient is old enough to gargle, the same fluid may be thus used in addition.—F. H. S.]

TREATMENT OF CROUPOUS PNEUMONIA IN CHILDREN.

Dr. Dessau (Archives of Pediatrics, Sept., 1891) says that in croupous pneumonia, the chief danger to life arises from the failure of the circulation, and hence that the chief attention should be given to the heart. A pulse of 160 and temperature of 104° to 105° F. at the onset of the disease has a grave import, but not necessarily a fatal issue. Convulsions may result from the high temperature. Here antipyrin is of service. Apathy, with inability to hold up the head in the early stages, is unfavorable. The mortality seems to have a definite relation to the amount of albumen in the urine. The extent of lung tissue involved may bear no relation to the danger of heart failure, though few cases recover when both lungs are affected. A natural termination begins suddenly with profuse perspiration, caused by sudden return of blood to the cutaneous vessels; the indication, therefore, is to employ diaphoretics, as the nitrates, Dover's powder, etc. The warm bath or hot sponging may be used for the same purpose. In sthenic cases the "ice cradle" or wet pack is of service. The dilatation of the vessels produced by one of the above methods will relieve pulmonary congestion, and perhaps aid the excretion of some of the disease-poison. The liver has an immense blood-holding power, and this may be made use of to relieve pulmonary engorgement by stimulating its function. One-tenth of a grain of calomel every hour for six doses, and then every three or four hours afterwards, will often produce excellent results. Aconite may also be given at the outset in hourly drop or half-drop doses; it slows the pulse and gives the ventricle a longer time for its diastole. The use of digitalis in croupous pneumonia is based upon false principles, for it has a tendency to diminish the vascular area. Its action is to empty the arteries into the veins and not the veins into the arteries, as is desired. It stimulates the left heart, which already has an undue advantage over the right heart. Carbonate of ammonia is also objectionable, because its stimulant-expectorant effect tends to convert an otherwise favorable case into a fatal one. Poultices are useful in favoring diaphoresis. A "warm wet-binder" [or a cotton poultice, as recommended by Dr. Hutchins] is a convenient and preferable substitute. The ice-bag may be of service in strengthening the heart, but it must be used with care in children, as it often produces collapse.

DISEASES OF THE SKIN.

BY SAMUEL SHERWELL, M.D.,

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ANGIOKERATOMA.

J. J. Pringle, M.B., F.R.C.P., Physician and ordinary of the Skin Disease Wards Middlesex Hospital (Monatshft. f. Pract. Derm. Vol. xiii, Nos. 11 and 12).

Under this title the author describes a series of cases occurring in his own practice and others of Drs. Sangster, Colcott, Fox, William Dubreuth, Mibelli, and others. He gives the credit of originating the name to Dr. Mibelli, who gives history of his case in the "Giornale Italiano della Malattie veneree é della Pelle," Fasc. iii., September, 1889.

In all the cases the history is identical, it being a disease that appears after the patient has suffered long from pernio or chil blains; it is symmetrical in most cases on hands; appears generally also in same manner on feet and on dorsal aspect of both. There would seem to be at first stage, first the chronic dilatation of the vessels in the sites affected, then a permanent telangiectasic change or condition, then hardening, and then the peculiar wart-like condition of a very dark-red color, which makes the name appropriate. He gives his reasons for differential diagnosis as between this and similar affections succinctly and yet fully, as for instance in discussion of Vidal's and Besnier's remarks on similar conditions, and also makes the difference between this and lymphangioma circumscription "or lymphatic warts" clear.

First, he says the lymphangiomas are never preceded by chilblains, while the others always are, and secondly their appearance at a different time of life, and also notices the fact of their not appearing to lead to general enlargement or elephantiasic conditions, and also that on being pricked, blood follows in these angiokeratoses, and not a pale sero-albuminous fluid, as in lymphangioma; in short they have a different developmental etiology and history, though macroscopically somewhat alike. (Electrolytic punction seems the best treatment says Dr. Pringle). Another case is given in later number of same journal, Vol. xiv, No. 1, by Dr. Radcliffe Crocker—history of origin, etc., identical with those given by the other writers on the subject.

ON EXTRA-GENITAL CHANCRES

By Dr. E. von Düring, Professor of Dermatology and Syphilis at the Imperial College of Medicine, Constantinople (Monatshft. f. Pract. Derm., Vol. xiii, No. 11).

The article is well worth reading by those who are interested on this subject. As may be fancied the list is a very large one. He gives notes of forty-two cases, collected in eighteen months, in order they stand, viz.:

One case on the right nipple of nursing woman.
Seven cases on the lips and cheeks.
Three cases on tonsils.
Thirty-one cases in and around neighborhood of anus.

His remarks on the above cases, he being a close and accurate observer, are as has been said, worthy of note.

DISTRIBUTION (LOCAL) OF THE NORMAL FATTY SECRETIONS OF, AND ON THE SURFACE OF THE SKIN.

By X. Arnozan, Chargé du Cours de Dermatolgie à la Faculté de Médicine de Bordeaux, (Annales de Derm. et de Syph., Vol. iii, No. 1, p. 1, January, 1892).

A most interesting paper in view of the statements it contains, first as to the curious physical properties of powdered camphor floating on water, its gyrations, etc., in or on top of an ordinary vessel of water, and the equally curious and not easily accountable cessation of their movements in presence of a minute drop of oil, or oily secretion. Then again, which is equally novel and ingenious, the use to which the author puts this unique property of the gum camphor, in ascertaining which portions of the cutaneous enveloping surface of the body, either secrete, or at least on which is present fatty matter; that is in any abundance.

The author gives as his method, the simple rubbing of a glass or other rod against the portion of skin one wishes to test, and then putting it in contact with the surface-water on which these particles of camphor are exercising their vibratory movements, when immediately he says, as by magic, the movements will cease; the particles before separated, and so to speak, exercising themselves, will instantly become grouped and have a great tendency towards the sides of vessel in which they are floating. An ordinary tumbler absolutely clean, and containing perfectly clean water, he considers as good as any vessel or means that may be used. The camphor should be in grains or granules, not larger than the head of a pin. He refers to "Malagutti's Dict. Encyclop. des Sciences Médicales, (article Camphre,)" as confirming the verity of this phenomenal action of camphor, which we take it, is far from being generally known, and expresses his belief that fatty bodies or substances are the only ones known to have this action; glycerine and vaseline for example, having no such property; ether and alcohol simply interfere with the rotatory action somewhat, but do not stop it. Saliva has no effect, and various powders, unless sprinkled on in quantity enough to cause mechanical obstruction and interference, none. Emulsions, soapy in character, of course do, but that might be expected from their constituents.

This being settled then in the doctor's eyes, he goes on to experiment on the different parts of the tegumentary surface, and finds in brief a very marked difference in different parts of the body, some of which, according to him, have no appreciable amount of fatty matter distributed on them, while others, on the contrary, have much, that is the rule to which he further adds there are, and may be exceptions.

He gives as the most abounding and pronounced in fatty *enduit* (as well as two outline diagram figures), the following regions as being most plentifully supplied. The whole of the face and hairy scalp, the nucha, the back, the presternal region, the shoulders, and the pubic region. The sub-hyoid region and the neck (in front) are relatively slightly supplied. The regions wanting in fatty covering, or at any rate having the sebaceous secretion very much less manifest, are those of trunk below umbilicus, the thighs and gluteal region, and the limbs in general, but there is no sharp line of demarcation.

He says the surfaces of palms of hands have never given any reaction to this test; sometimes he got a reaction while testing the axillary region, sometimes not. When perspiration was most free in the latter, the test was negative. He says that in the few infants of tender years he has tested, that the reaction was *nil*, even on the scalp they were, however, as he says, well washed, healthy and clean ones; and further goes on to say, that as might be expected, the fatty secretions of the skin go on increasing to mature life, making a notable increase about the time of puberty, and decrease in old age.

A great deal of the merit of Dr. Arnozan's paper consists in the side-light, or at least of the bearing it would seem to have on the consideration of the so-called "Eczema Seborrhoicum" of Unna, and other affections of the sebaceous glands, which are being much discussed just now.

It will be of great interest if some of his observations are confirmed in view, for instance, of his not finding oily matter on the palmar surfaces, which perspire, as we know, so freely; especially as Unna and some others are now maintaining that the sebaceous glands play only a secondary part to the coil or sudoriparous glands in furnishing oily matter.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

MODERN MEDICAMENTS. A complete list of their standard pharmaceutical preparations and specialties has just been issued by Parke, Davis & Co. Handsomely gotten up with engraved cover and forty engravings of their buildings at Detroit, New York, Kansas City and Walkerville, Ontario, with views of the interior of the laboratories and offices at Detroit.

No such complete, comprehensive and well-arranged list of the products of this house has ever before been published. To those who cannot see in person the thorough equipment of this house for the manufacture of the highest class of medicinal preparations, this list will convey some idea of their facilities, organization and system, which have contributed to their success. Copies of this list will be mailed all physicians on request.

A. B. C. OF THE SWEDISH SYSTEM OF EDUCATIONAL GYMNASTICS: A Practical Hand-book for School Teachers and the Home. By Hartig Nissen. With seventy-seven illustrations. Pp. 107.

The author, who is instructor of physical training in the public schools of Boston, believes the Swedish system of gymnastics to be the best for schools and homes, although for gymnasiums and colleges he prefers a combination system. To aid him in his school work he has prepared the A. B. C., which seems well adapted to his purposes. The cuts are selected from the best works of Sweden and Norway, and make it very easy for anyone to understand how the exercises should be performed.

AGE OF THE DOMESTIC ANIMALS: Being a Complete Treatise on the Dentition of the Horse, Ox, Sheep, Hog and Dog. By Rush Shippen Huidekoper, M.D. Philadelphia: F. A. Davis. Pp. 217. Price, $1.75.

An excellent book on the subject of which it treats, such as was to be expected from the pen of Dr. Huidekoper, one of the leading veterinarians of the world. The 200 engravings which illustrate the volume make clear many points in the text, which without them would be difficult of comprehension; not because the author's style is involved, for he is in all things one of the most practical of men, but because the subject itself is so difficult to understand that an unillustrated text would be of little practical use.

THE PHYSICIAN AS A BUSINESS MAN: Or, How to Obtain the Best Financial Results in the Practice of Medicine. By J. J. Taylor, M.D. Philadelphia: The Medical World, 1891. Pp. 144. Price, $1.00.

The popular idea that physicians are, as a class, poor business men, is alas! too true. How many there are, who after a long life and a busy practice, die without having made any adequate provision for their families! The experience of the officers of the New York Physicians' Mutual Aid Association is that the money which is paid by them to the widows of physicians often tides them over a period of embarrassment, due to the neglect of improvident husbands, and is in some cases all that is of value in the estate. We commend to every brother practitioner this little book of Dr. Taylor. While we do not agree with him in all points, still we believe that many of his suggestions are most admirable and worthy of adoption. No better investment can be made than in the purchase of "The Physician as a Business Man."

BIOGRAPHY OF EMINENT AMERICAN PHYSICIANS AND SURGEONS.

Under this title Carlon & Hollenbeck, publishers, of Indianapolis, announce a new book which is to be edited by R. French Stone, M.D. It is intended to supply a complete review of the real workers in the profession and what they have accomplished for it. It will be sold by subscription only; price, in cloth, $8.00. Judging by the advanced sheets and prospectus, the work will be one of great merit.

THE INTERNATIONAL MEDICAL ANNUAL. Ninth year, 1891. E. B. Treat, New York.

The above work contains a few original papers that are of value, but for the most part it is a mere compilation of well known and very recent magazine articles. Considerable space is given to a number of old therapeutic remedies; some of the later drugs are also discussed. The best of the articles is one on the "Hand in Nervous Disorders," which has a number of illustrations. In this the very important note is made that in the same disease, at different stages of it, the hand may have different appearances. Loss of substance, immobility, tremor, may all be present at various times during the same disease. The relation of these many changes in the time of coming is regarded as very important. Tremor is said to be an exceptional condition in lead paralysis, while wrist-drop is generally present. In certain hysterical conditions aid can be obtained in making the diagnosis in the absence of any muscular change in the hand; such change is, of course, common in diseases with a distinct lesion. As this article is mostly new and has never before appeared in its present form, it will repay study by the student of clinical medicine, as well as by the neurologist. HENRY CONKLING.

PTOMAINES, LEUCOMAINES, AND BACTERIAL PROTEIDS: Or, the Chemical Factors in the Causation of Disease. By Victor C. Vaughn, Ph.D., M.D., etc., and Frederick G. Novy, Sc.D., M.D., etc. Second Edition. Philadelphia, 1891.

In this edition the authors assume that the position taken in the first edition, viz.: that all bacterial diseases are caused by toxic products of the bacteria and not by the mechanical action of the bacteria, or by the starvation of the tissues, etc., as had been supposed, has now found universal acceptance. They are also inclined to believe that the employment of bacterial products in producing immunity and in the treatment of diseases, offers a field of most interesting work.

The authors do not confine themselves to a merely technical treatment of the subjects of the title, but add greatly to the value of the treatise by pointing out the bearings of their investigations on all sides. The book will be found interesting and instructive by all medical men. B. MEADE BOLTON.

ESSENTIALS OF BACTERIOLOGY: Saunder's Question Compends. By M. V. Ball, M.D. Philadelphia, 1891.

PRINCIPLES OF BACTERIOLOGY. By A. C. Abbott, M.D. Philadelphia, 1892.

Although these two works are meant to be used in essentially the same way, they can hardly be said to stand in competition, one with the other; they are more properly supplements. Abbott's book deals at length with details of manipulation recommended as having been found useful by the author himself, so that one could use the book for self-instruction. Ball's book, on the other hand, lacks many of the minute details of laboratory manipulation, but in it are found short, concise descriptions of the bacteria themselves. In this respect and others the two books form admirable companions.

It is a gratifying sign of the increasing interest taken in purely scientific medicine that two books devoted to bacteriological technique with little or no reference to the immediately practical bearings of the subject should appear in such quick succession. The need of such books has long been felt, but it is true that the number of students and others interested has been so small that the demand up to a comparatively recent date has hardly justified the publication of books devoted to the principles or essentials of bacteriology. Another reason also for the lack of demand for such books is found in the fact that those who have needed them have found such admirable treatises in foreign languages. But it is evident that the circle of those feeling the need of a knowledge of bacteriology has greatly widened. It is becoming more and more apparent that a knowledge of bacteriology is as essential to the modern physician and surgeon as any of the older sciences allied to medicine. We are learning that it will not do to depend entirely upon empiricism, and we are rapidly coming to see the necessity of leaving principles for guidance instead of trusting alone to so-called practical formulæ. Virchow, in a recent article, says among other things: "And in fact, if one believes that it is merely sufficient for a physician to be practical and skilful, it will be indifferent to him whether he has scientific principles or not. Upon such a foundation is built, strictly speaking, the worldly wisdom of many physicians." "It is not the fort of every one to be an investigator and to open up new paths in science, but everyone should be able to appropriate present knowledge and to use it for practical purposes. This, however, can only take place where he has so far learned also the general rules, or as we like to say, the general laws, that he can turn them to use without trouble in a special case." It is, perhaps, too much to expect that these statements will find universal acceptance as yet, but we sincerely hope that there are enough students and practitioners interested in scientific medicine to insure these books a wide circulation.

B. MEADE BOLTON.

MATERIA MEDICA, PHARMACY AND THERAPEUTICS. By S. O. L. Potter, A.M., M.D., M.R.C.P. (London). Blakiston, Philadelphia, 1891. Third edition.

The above is a large handsome.appearing volume of 767 pages. In addition to an introduction, an appendix, and an index, it is divided into three parts. In the introduction is a long list of definitions. These are the best that have appeared for many years. The derivation of the term is given ; then comes the definition proper. This is usually in short, well-chosen words, being followed by a longer explanation of the nature or method of action of the matter defined. Many old definitions relating to classifications of drugs are revised. They are very welcome, for in many books of recent years old terms have been ignored without gain of any kind. These definitions have been made with care, although one can hardly believe that "cardiac stimulants are remedies that increase the force and frequency of the pulse in depressed conditions of the cardiac apparatus" is good phraseology. The pulse is related to the heart, but its force and frequency are not always indicative of the condition of the organ. Cardiac stimulants are stimulants, whether there is depression or not. The two words "pulse and depression" are out of place in the definition. On page 55 the discussion of drugs begins. Abrus is the first, and zingiber on page 406, is the last. Here, as in certain other portions of the work, the alphabetical order is followed.

Pharmacy and prescription-writing are given seventy-two pages. It is stated that there are fifteen officinal alkaloids. A further list of unofficinal alkaloids is given, in which antipyrine and antifebrine are included. An excellent account of the metric system is given. Calumba is recommended as the best of the simple bitters to be used in combination with iron.

The third part of the work is devoted to therapeutics. On 210 pages the various diseases are given in alphabetical order, with mention of the remedies that may be used in their treatment. The *appendix* is like a reference book. There are pages devoted to differential diagnosis, composition of patent medicines, hypodermic formulæ, how to treat cases of poisoning and drowning, etc. There is a short but excellent account of temperature. The author gives the lowest temperature of which there is record, as 71.6° (sclerema neonatorum); the highest is given as 122°.

The book is so printed, and the subject matter that it contains is so arranged, that it can with convenience be used as a work for ready reference.

HENRY CONKLING.

MATERIA MEDICA, PHARMACOLOGY AND THERAPEUTICS. In two volumes. By Shoemaker and Aulde. F. A. Davis, Philadelphia, 1891.

The above work, in two volumes, the first of which bears the stamp of 1889, and the second of 1891, published sufficiently late to discuss the action of diuretin, is one of the most complete, most practically useful, and scientific works on its subject that has been contributed for many years to American medical literature. There are many criticisms to be made, but the good points are so numerous that they quite outweigh and counterbalance the defects. All works on this subject must necessarily contain much that is repetitious. The great principles relating to the methods of administration and the physiological action of drugs are to be found in the master-works, encyclopædic in design, which have become classical. The existence of this repetition does not relate to therapy, as here the range of the author's practical experience must determine the strength or weakness of the subject. In the newer works definitions may be altered, new tables of classification made, and complete indices added, but these are more or less fanciful and do not alter or affect the broad principles upon which the subject is founded. Books that contain nothing but the old well-known facts are mere collections of matter that can be obtained elsewhere. Those that contain nothing of the science are nonsensical in design. They make most tiresome reading, for theory and practice must go together. In the making of a book, therefore, it is a nice point to determine just how much of the established rules and principles are to be used. When to the proper amount is given on every page some proof of the authors' individuality, there is made the perfect book on medical matters. In the last few years there has been contributed to medical magazines an immense amount of valuable matter relating to medicines. To be of permanent use such articles must be collected at time of publication. The authors of this work have evidently done this, and they are to be congratulated upon the volumes they have published. They seldom become tiresome reading. They are generally most refreshing. The comprehensive plan of the work recommends it to the laborers in all departments of medicine.

There are several points of criticism to be made on the use of prescriptions in volume ii. In a book on some special subject, such as heart or lung disease, prescriptions of remedies used are useful to the reader, for they give the work of a specialist in his own department. But in a book that deals with the treatment of all known diseases, the printing of prescriptions—the combination of numerous drugs—is a matter for regret. One hears, not infrequently, from the users of routine prescriptions, that while in a number of cases the combination acted well, in another case it was worthless, and surprise is expressed at the result, while in fact the result is conclusive evidence of the uselessness of such prescribing. Some combinations are strong, but generally single doses should be given to meet single ends. "Shot-gun" prescriptions are unscientific for the prescriber and unwholesome for the taker.

Of the pages of the second volume, 621 are devoted to drugs. By actual count the following facts were collected: There are 480 drugs discussed; 680 prescriptions are printed in regular form; 312 pages contain no prescription; the greatest number of such continuous pages is seven; 297 drugs are without prescriptions, the vast majority of which are medicines seldom used, or of such a nature that no prescription could be written relating to any disease; among these are oxalic acid, barberry, bursa-pastorius, calamus, dita-bark, fermentum;

thirty-one prescriptions are given to mercury alone. The number of prescriptions (680) in relation to the number of pages and important drugs is surprisingly great. Much valuable space that could better be used is thus taken up.

Among these prescriptions are many with numerous drugs. The greater criticism belongs, however, to those containing two remedies, but supposed to be capable of producing the same result. Thus there is one of codeia and hydrobromic acid to allay cough. Codeia alone will allay any cough. Hydrobromic acid with it is a waste of good material. The scientific inquiry would be to see if hydrobromic acid alone would answer. Again there is a combination given of agaricin and aromatic sulphuric acid for the night-sweating of pulmonary tuberculosis. It may be stated here that this condition is most amenable to treatment. Some single drug will always do it. The acid is one of the best. Agaricin is a more untried remedy, and such a combination would tell nothing of its powers. To test individual action, drugs must be given alone. Then there is a combination of nitro-glycerine, digitalis, strophanthus and other remedies in tablet-form. One of these is to be taken every so often, until certain symptoms are relieved. The case is yet to be seen where nitro-glycerine is to be given *at the same time* as either of the above drugs. In a vast number of cases it can be given one or more hours after with the happiest results. This method is the more scientific and accurate.

The authors have been somewhat inconsistent in the stand which they have taken relating to proprietary medicines and to the various formulæ made by drug houses. One is much surprised at the article on antipyrin. Scarcely a page is given it and its action is not discussed. The authors believe that this preparation should not be used by physicians, since it is made as a proprietary article. They believe that antifebrin, or some similar remedy, will take its place. Notwithstanding this censure, there appears on page 798 a description of certain forms of pepsin made by two well-known American houses. To these great merit is attached. Of course their preparation is a secret, quite as much as the antipyrin. The names of a number of these drug houses appear throughout the book. This is a new feature.

The first volume deals with general principles and agents that are not drugs. Much that is new and interesting is to be found in these pages. The first point that strikes one's attention is on page 33, under the heading of *trochisici.* The number of officinal troches is given at sixteen. The belief is expressed that *serious results* may come from an unwise use of troches. A nicety and carefulness of expression is seen in the statement that tablets of Dover powder have created a taste for the *effects* of opium. The *cause of certain forms of renal disease* is put down to the *use by the laity of chlorate of potash.* There is certainly no drug that is used more extensively without medical advice. Tablet-forms are common. The above statement is emphatically made. It compels attention and thought. The authors, doubtless, have originated a truism. Alcohol and opium produce their pathological changes. The relation of cause and effect is apparent, but to find the ætiological factor for changes that come on in certain organs, especially the kidneys, in an insidious manner is often difficult. Here is one solution, which is strongly probable. To the use by the laity of many drugs the authors have given the name "medical tippling." They pronounce the practice as abominable.

Alkalies are divided into direct and remote. These latter do not have an alkaline reaction. The stomach is acted upon by the soda salts; the kidneys by the potash; the citrates, tartrates, etc., diffuse into the blood and are changed into carbonates. The use of alkalies is to neutralize gastric accidity, improve gastric juice, make the blood more alkaline, modify secretion.

Twenty-four stimulating expectorants are mentioned, ranging from cod-liver oil to terebene. Tobacco, in smoke, is put down as a pulmonary sedative. Following these classifications there is a discussion of spasmodic asthma. Four themes as to its cause are given : Bronchial spasm, diaphragmatic spasm, constriction of the tubes by swellings, changes in the nasal tract.

The authors believe that there is a distinct relation between medicines and antiseptics, and that antiseptic remedies are not applicable only to surgical cases. Antiseptics are preventive, while germicides destroy the bacteria that already exist. Forms of bacteria exist in the healthy body. They are destroyed there by organisms belonging to the body, which are in the nature of white corpuscles and are called *phagocytes*. A constant warfare between these bodies and the bacteria goes on. The destruction of one by the other means health or disease. Certain remedies aid the action of phagocytes. Quinine holds the leucocytes in the vessels, preventing their migration. The destruction of the germs of malaria is thus accomplished. The hypodermic use of the drug has a more certain and rapid result. The bacteria can be eliminated somewhat by the use of cathartics. The liver aids in this destruction. Hepatic stimulants are among the best.

Climatology is discussed in its relation to various diseases. Rattray's observations are quoted, showing that the number of respirations per minute are less in a hot climate. Under these conditions the amount of air taken in is less, the cardiac-beats are diminished, appetite is less, and changes in diet are required. The functions of the skin are increased by twenty-four per cent. Warmth is required for diabetes. Cases of chronic renal disease, where any excessive work done by the kidneys is not desirable, should have no exposure to the cold of winter. A warm climate is best. This observation suggests that severe amelioration in the condition could be obtained by those renal cases compelled to live in a cold climate by having extra functional activity of the skin.

In the second volume, which deals with drugs, it will be noticed that the percentage of arsenious acid in Fowler's solution has been changed. Years ago there were sixty-four grains of the acid to a pint. This would make mv. of Fowler equal to grain $\frac{1}{24}$ of arsenious acid. The new solution is in the strength of one per cent. mv. of this, therefore contain grain $\frac{1}{20}$ of the acid. Fowler's solution is frequently given in large doses, showing that the usual printed dose of arsenious acid could be made much larger. Compound spirits of lavender has been changed to compound tincture. No mention is made of the very excellent hypnotic action of this drug. We fail to find any account of the composition of sodium salicylate. Salicylic acid is generally given in less amount than the soda salt ; yet this latter contains a large amount of the acid. On Squibb's cans of sodium salicylate there is printed a label which shows that eighty-five per cent. of the salt is salicylic acid, there being only fourteen per cent. of sodium.

The nature and administration of ether are discussed. Death is said to come from respiratory failure. It is suggested that the color of the lips and ears is the best guide as to the patient's condition. Some eleven "don'ts" are given relating to its use. To these may be added another. In operations about the chest, where there is fluid, no anæsthetic should be given on account of the cramped position of the organs in the thorax. Considerable space is given to *aristol*. This is an amorphous precipitate made by adding iodine in iodide of potash to a watery solution of sodium hydrate, in which is thymol. The salt does not dissolve in water; an oily solution can be made. It has no odor, is not poisonous, is non-irritating, and promotes secretion. It may be used in ointment or as a powder. Old ulcers of the leg have been quickly cured by it. Tinea, lupus erythematosus, chronic discharges yield to it. The powder has been used for insufflation in the ear with excellent results. The authors believe that the drug will take the place of iodoform. The solubility of *caffeine citrate* can be increased by adding antipyrin or salicylate of soda. Of course if the stimulating properties of the drug alone are wanted, such additions should not be made. Some good combinations are given: caffeine and phenacetin; caffeine and strychnine.

Warburg's tincture is called tincture antiperiodica. It contains in a pint: Rhubarb, angelica seed, elecampane, saffron, fennel, aloes, gentian, zedoary, cubeb, myrrh, agaric, camphor, alcohol, quinine (160 grains). Fifty-one preparations of iron are given. The dose of *papani* is from one to five grains. This digestive ferment can be used in either an acid or an alkaline solution. Pepsin cannot act in an alkaline solution. It is more vigorous than pepsin as a digest. It may be given after eating. It has a destructive action on forms of membrane.

History repeats itself in a case of poisoning from *chlorate of potash*. In this case the patient was given 460 grains of the drug to be dissolved and used as a gargle. One-half was taken in solution and in thirty minutes the remainder was drunk. Soon after came faintness and great thirst. Some beer was then drunk, producing emesis. In twelve hours the patient had headache, pain in abdomen, pallor, cyanosis about lips, rigors. A drachm of albuminous urine was obtained. No more was secreted. This contained altered blood corpuscles. Blood drawn from the vessels showed destructive changes. Death came in six days. Ulcerations and congestions were found upon *post-mortem*. The drug must have been rapidly absorbed, as emesis was produced in thirty minutes. In the well-known case of Dr. Fountain, who took one ounce as an experiment, violent gastric enteritis resulted. There was complete suppression of urine. There was no emesis. In the first-mentioned case constipation was present. Dr. Fountain died in seven days. The kidneys in both cases seemed to be the point of attack. The constipation mentioned is instructive in showing that intestinal ulceration may exist without profuse discharges.

The above two volumes are written in a most pleasing style. They treat of all known means for combatting disease. There are few published works relating to the management of disease that are as useful. In the first volume the paragraphs are printed in Long Primer. Here and there is printed a word in Long Primer Rancine. This calls attention at once to some important fact. In a historical, scientific, and practical sense the work is to be heartily recommended. HENRY CONKLING.

CORRESPONDENCE.

TREATMENT OF CORNEAL OPACITIES.

February 12, 1892.

To the Editors of THE BROOKLYN MEDICAL JOURNAL:

The January number of your Journal came under my notice several days ago, and I read the controversy between my two friends, Drs. Faught and Alleman.

The question for me to decide is, whether cases having opacities of the cornea, were referred to Dr. Faught during Dr. Alleman's term of service as my assistant, I must say in justice to Dr. Faught that such cases were referred to him, not only before Dr. Alleman became my assistant, but during his time and since.

Whether these two physicians apply the electrode in the same way I am not called upon to answer, but suffice to say that Dr. Faught's method has been very successful, and I may also add that the application of electricity has not been limited to diseases of the cornea alone, but has also been applied to various intraocular diseases as well.

Very truly yours,

L. WEBSTER FOX.

1304 Walnut Street, Philadelphia, Pa.

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To the Editor of THE BROOKLYN MEDICAL JOURNAL:

I fail to see that Dr. Fox's statement in any way justifies Dr. Faught's previous letter.

Were it true that that they had used galvanism in corneal cases, and that I was informed of the fact, it would not effect the taking of an isolated sentence from my paper, and construing it as a claim for something which I distinctly disavowed in the same paper. It seems to me an outrage, when one has devoted several years hard work to testing the efficacy of a method of treatment and publishes his honest results, that he should in consequence be subjected to such malicious misrepresentation.

If, as Dr. Fox states, any cases of corneal opacities were referred by him to Dr. Faught while I was with him, I was not aware of the fact, and it must have been done with the utmost secrecy, for I imagine that I saw all the cases treated in the office, and most of the case records were made by myself.

As this unprofitable discussion has already taken up too much of your valuable space, I shall continue it no further.

Yours, L. A. W. ALLEMAN.

MISCELLANEOUS.

THE USE OF ELECTRICITY IN CORNEAL OPACITIES.

BY GRANVILLE FAUGHT, M.D.,

Philadelphia.

The following is from the fourth edition of a treatise on Medical Electricity, published in London, in 1795, by Tiberius Cavallo, F.R.S.

D. W., æt. thirty-six, had been treated for several months without success at the Westminster Dispensary, for a violent inflammation of the eyes. He was then referred to Mr. Partington for treatment by electricity, who reports as follows: "The sight of the right eye, which was most affected, was so far impaired that when it was turned toward a window, the eye-lids being forced open, he could perceive only a red glare of light like a ball of fire; but the rest of the room seemed to be equally dark, so that he could not distinguish any object in it. Mr. Partington began to electrify him the 21st of October, 1776; and three days after the inflammation began to visibly abate; and in a fortnight's time it was quite subsided. He continued to be electrified every day for five weeks, till he attained a degree of sight sufficient to distinguish objects on the other side of the way." The method used was to throw electrical sparks from a wooden point directly into the eye. This report is not in any way intended as a reply to Dr. Alleman, but is simply published because of its interesting bearing on the subject, as the work of an investigator 116 years ago.

BROOKLYN VITAL STATISTICS FOR JANUARY, 1892.

By J. S. Young, M.D., Dep. Commissioner of Health.

Population estimated January 1, 1892, 880,780; Births reported, 1,347; Deaths reported, 119.

CAUSES OF DEATH.

Croup, 48; Diphtheria, 99; Scarlet fever, 64; Typhoid fever, 8; Whooping cough, 4; Pneumonia, 330.

REPORTED CASES.

Diphtheria, 217; Scarlet fever, 350; Measles, 121; Typhoid fever, 30; Small-pox, 1.

DEATH-RATE FOR JANUARY, 1892.

Brooklyn, 24.48; New York, 27.50; Philadelphia, 31.74; Berlin, 25.46; London, 29.52.

JOHN RADCLIFFE, M.D.

"Use all mankind ill;" such was the maxim which this celebrated eccentric physician imparted to his protégé and successor, Dr. Mead, as the secret of success in his professional career.

He was a native of Yorkshire, England, where he was born in 1650. At the age of fifteen he became a student in one of the colleges of Oxford, where he took his M. A. degree in 1672.

He then took up the study of medicine, but seems to have studied in an irregular and superficial manner. The writings of Thomas Willis, then at the summit of his fame in London, were those which Radcliffe chiefly studied. When Dr. Bathurst, head of Trinity College, asked him once in surprise where his library was, he pointed to a few vials, a skeleton and an herbal, saying: "Sir, this is Radcliffe's library."

He soon acquired a considerable degree of reputation as a successful practitioner of medicine, though he never paid any attention to the rules and methods then universally followed, and drew upon himself the enmity of the older practitioners with whom he waged an everlasting war. Nevertheless, in the course of a couple of years, his business became very extensive, particularly among the higher ranks.

He was a man of great decision,—the result of native talent. He gave his predictions in a tone of confidence. Having predicted with great accuracy the fate of the Duke of Beaufort, he was always referred to as an oracle to decide disputed points of practice. It has been said of him that he was deservedly at the head of his profession on account of his great medical penetration and experience, rather than his learning.

He was physician to Queen Anne, but having offended her by declaring that her malady was "nothing but an attack of the vapors, and that she was in as good health as any woman breathing, could she but believe it," he was dismissed from her service, though she continued to consult him privately, and sent for him at the time of her death, though he did not respond to the call.

He refused to accept the position of physician to William III on account of his political principles, though the king continued to consult him and paid him a single fee of 500 guineas, and afterwards averaged one year with another. over 600 guineas per annum, until he offended the monarch on the occasion of his being consulted on account of the dropsical condition of the king's extremities by the remark: "Sire, I would not have your majestie's two legs for your three kingdoms."

Queen Mary he attended in her last illness, the small-pox, and was severely blamed for failing to save her life; and was equally so for failing to save the life of Queen Anne, whom he did not attend.

He lived next door to Sir Godfrey Kneller, the celebrated artist, and when they quarrelled over the gate separating their grounds, he sent the artist word that he "might do anything he pleased with the gate except paint it." Sir Godfrey replied that he "could take anything from Dr. Radcliffe but physic."

He never married, though once engaged to a lady with a fortune of £15,000. Before the wedding day, however, it was discovered that the health of the lady rendered it incumbent on her honor that she should marry her father's book-keeper.

The art of uroscopie, as it was called, was in his time much in vogue. Provided with this infallible indication of disease, a foolish woman called upon him and presenting the specimen, hoped the doctor would tell her the cause of her husband's illness and prescribe the proper remedy for his relief. "Where is he?" cries the doctor. "Sick in bed four miles off." Taking the vessel and looking at its contents, he inquired what the patient's business was, and upon learning that he was a boot-maker, retired for a few moments and making the necessary substitution returned, and handing the vessel back to the woman, said: "Take this home with you, and if your husband will undertake to fit me with a pair of boots by its inspection, I will make no question of curing his malady by a similar examination."

Though his income was very large, he was exceedingly mean and avaricious. He never could be brought to pay his bills, though in many other ways he was very liberal. Though not himself a reader he founded the Radcliffe Library, the Radcliffe

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ORIGINAL ARTICLES.

THE PRACTICAL SANITARIAN, AS ILLUSTRATED BY A LIFE SKETCH OF A. N. BELL, A.M., M.D.

BY STEPHEN SMITH, A.M., M.D., LL.D., NEW YORK.

Preventive medicine as a branch of the public service is of recent origin in this country. It is within the memory of men not past middle life when an organized health department as a necessary part either of municipal or state governments was unknown. The few feeble health organizations then existing were the spasmodic outcome of some epidemic, and their activity and responsibility ceased with the subsidence of the public excitement on which their origin and life depended. But within a period of thirty years public opinion in the United States has undergone a marvelous change in regard to the value of state and municipal health regulations, and a properly constituted authority devoted to their enforcement. There is now scarcely a city, village, or township which has not a more or less thoroughly organized and efficient health department as a branch of its civil service. Not only is this true of cities and small communities, but the states have now, few exceptions, boards of health, exercising a coördinating supervision and jurisdiction over the local boards. Finally, our zeal in perfecting sanitary administration culminated in the organization by Congress of a National Board of Health having jurisdiction over all matters relating to the public health beyond the limits which constitutionally bound the operations of state authorities.

Thus, within the short period of a quarter of a century, this country established a system of sanitary government which extended from the civil regulations of the most remote hamlet to the highest functions of national administration.

Those who have been active participants in the medical history of this period are not at a loss to determine the initial movements of this great reform, and the active workers, who with patient effort and unabated courage, in spite of almost insurmountable obstacles, carried it steadily forward to its successful issue. The first impulses came from England, where Dr. Southwood Smith, Edwin Chadwick, Dr. Farr, John Simon, Dr. William Budd, and other great leaders in medicine and social reforms had awakened the government to a full realization of the enormous and increasing sickness and mortality-rate of the people from preventable diseases. The startling facts contained in the writings of these English reformers found a receptive soil in the minds and consciences of many men in this country, then in a position to appreciate their force when applied to the same classes of population here. Jewell, in Philadelphia; Griscom, in New York; Snow, in Providence, and a few others, had already done something to prepare the way for the coming reform.

When the influence of this reform movement in England reached our shores, scores of younger men, well equipped for the contest, entered the lists, nor ceased the struggle until the battle was won. Clark, of Boston; Harris, of New York; Bell, of Brooklyn; Hunt, of New Jersey; Rauch, of Chicago; Baker, of Michigan; White, of New Orleans, are but few of the names of the men who enlisted all their energies in the great undertaking. Many of the members of that band of sanitary reformers have passed away, but their mighty achievements in the construction of a branch of the public service devoted to the protection and promotion of the public health in all our states and municipalities, will forever remain an imperishable monument to their self-sacrificing devotion to the promotion of human happiness, and the elevation of the standard of our civil administration.

In the early years of the agitation for sanitary reform (1860), a work appeared entitled "A Knowledge of Living Things," by A. N.

Bell, M.D. This little volume was designed for schools, and treated in a most interesting manner of the origin, growth, and peculiarities of the various forms of vegetable and animal life. To many readers the work was a revelation of the life of minute organisms hitherto unknown or unappreciated. And, indeed, in some matters the author fairly anticipated the more recent demonstrations of science. For example, in the account of the fungi, he says:

"The fungi possess the curious property of destroying their own reproductive powers, or of poisoning against themselves the soil in which they grow. Persons who have traveled much over our western prairie lands, cannot have failed to observe curious denude circles amidst the vivid green of rank vegetation. Such spots used to be attributed to the tiny feet of fairies, who were supposed to make the spots so marked, their place of revelry, hence they were called 'fairy rings.' Others attributed them to the revelries of a worse sort of spirits, the witches. Subsequently they were thought to be the effect of electrical action.

"Fairy rings are now known to be produced by the eccentric growth of various species of fungi—they may, therefore, be termed the vegetable ring-worms of the fields. Commencing as animal ring-worms at a small point, these fungi move progressively outwards, leaving a bare uninviting space behind them, upon which, for a time, neither other fungi nor grass will grow. Finally, however, grass returns, its seeds take root first at the centre, which part has been longest barren, and filling this up, follows the course of the fungi so as to produce a broad circular belt of scorched earth, which expands more and more in diameter. The fungi, evolved only on the outer edge of the belt, do not attack the centre, in which the soil seems to have lost its power of sustaining them.

"The species of fungi, commonly called mildew or mould, is so small as to be invisible, except when collected together in large numbers, and they are so light as to readily float in the atmosphere, and are thus subject to being inhaled. On being planted by this means into the blood of the animal system, the conditions are congenial to their multiplication.

"Several years ago, after being some weeks at sea, last from the Gulf of Maracaybo, one of my messmates for the first time in his life was taken sick with intermittent fever. On the first morning of his illness he complained of a musty odor about his bedding which led to breaking out his clothes-lockers underneath his bunk. In these lockers he had stowed various curiosities—carved cocoanut shells, boxes and bags made of seeds, rare nuts, etc., purchased of the natives. All of these were found to be mouldy. Previous acquaintance with the habitudes of the fungi had led me to suspect them as the cause of intermittent fever and other diseases, but up to this time I had no positive proof.

"The lockers and contents were thoroughly cleansed with boiling-hot salt water, and everything mouldy purified or discarded. A few days afterwards, two others, of only six in the ward-room, were also taken sick with intermittent fever. And here it may be remarked, that up to this time there had not been a case of this disease on board during our eight months' cruise on the Central American coasts. Under my direction we now had a general overhauling and breaking out of everything in the apartment. Adjoining the locker first found to contain mould, was the mess-locker, filled with edible stores. Here we found Pecan and hickory nuts mouldy *inside*. By this circumstance I was struck with the idea of the exceeding smallness of the sporules of the fungi, for how otherwise could they get *into* the nuts? The novelty of the idea induced me to lay aside some of the suspected nuts for particular examination, and for this purpose I carefully placed them in a drawer under my bunk. The rest of the nuts were thrown overboard. The next day, complacently enjoying the cleanly state of our quarters, now sweeter than a nut, I cracked one of those laid up for examination. Compared with those looked into the day before, there was an increase of opacity or blackness of the mould, and evident progress in the destruction of the kernel. The second day, progress was still more marked, and on first breaking the hull, there was an escape of smoke-like dust, which seemed for the most part to consist of the contents of the nut now reduced to that state. On the third day, I found the nuts cracking open, they were riven by the infinitely small fungi. I at once had them all thrown overboard. Less than a week afterwards, I was rewarded for my investigation by an attack of intermittent, the which my messmates enjoyed exceedingly. Subsequent service on the coast of Africa, and other notoriously unhealthful places, afforded me additional opportunities for investigating the nature of fungi, and I have long since concluded that this group of plants often causes other and worse diseases than intermittent fever."

Among the first to enter the field of discussion of public health questions was the author of this little work, and throughout the long contest he has stood in the front rank as one of the ablest and most uncompromising writers and speakers in the cause of sanitary reform. Dr. Bell, unlike many of his co-workers, has lived to aid, not only in laying the foundations of our magnificent public health service, but in placing the cap-stone upon the completed structure. His life's work, in the retrospect, embraces the more important incidents in the history of sanitary agitation and legislation in this country; and it is not only a fitting tribute to him, but a service to future generations of laborers in the same field, that the more important features of that life's work should be gathered and permanently recorded.

Agrippa Nelson Bell, the youngest of five brothers, was born in Northampton County, Va., August 3, 1820. His ancestors in both lines, Bell and Scott, were among the earliest Virginia colonists. His early life was spent on his father's farm, and in the typical log school-house of the time; but with abundant diversion of boyish sports, which secured him an excellent physique.

At the age of sixteen he took a dislike to the farmer's life, and engaged as a clerk in a country store, where he continued for two years. He then entered an academic school at Newtown, Conn. There his physical stamina served him a good purpose, for he was brought into competition with boys much his juniors in years, but seniors in knowledge. But he gained quick promotion. Early in the second year of his academic course, including Latin and Greek, he decided to begin the study of medicine, and became the private pupil of the late Dr. George C. Blackman (subsequently Professor of Surgery in the Medical College of Ohio).

At the age of twenty, young Bell went to Boston, and earnestly entered upon the study of medicine at the Tremont Street Medical School, with Drs. Jacob Bigelow, Edward Reynolds, D. Humphrey Storer, and Oliver Wendell Holmes, as his preceptors. He took his first course of medical lectures at the Medical Department of Harvard University. To improve his finances during the time, he read from ten to twelve o'clock six nights in the week, to a gentleman affected with amaurosis. From Boston, in the autumn of 1841, he went to Philadelphia, where he took a second course of medical lectures at the Jefferson Medical College, from which institution he received his medical degree in March, 1842. Soon after he entered upon the practice of his profession in his native county, at Franktown, Va., where he speedily acquired a large practice in a locality at that time noted for the extensive prevalence of malarial diseases. He married, November 22, the same year, Julia Ann, daughter of Arcillus and Jerusha Hamlin, of Newtown, Conn.

His wife's health failing early in 1844, he determined upon a change of residence for her, and upon entering the Navy, he spent the greater part of the summer of that year in New York, in preparation for the examination of the Naval Board, which he successfully passed in November, but owing to the failure of a bill before Congress at that time, for the increase of the corps of assistant surgeons, he did not receive his commission until March, 1847. He spent the interval in practice at Waterbury, Conn.

His first naval service, after receiving his commission, was on board the sloop of war "Saratoga," Commander D. G. Farragut, under orders to the Gulf Squadron, during the Mexican War. Dr. Bell served in the squadron to the end of the war, doing duty on board several vessels, and also at the yellow fever hospital on Salmadina Island, near Vera Cruz. He contracted yellow fever on board the frigate "Mississippi," which ship, on account of her badly infected state, had been ordered to proceed to Pensacola, Fla., to cleanse and return to Vera Cruz as soon as practicable. On arrival at Pensacola, Dr. Bell was, with others sick with the same disease, sent to the naval hospital at that place. Having sufficiently recovered in six weeks, he returned to duty on board the same ship, which again went to Vera Cruz. Shortly thereafter, he was transferred to the steamer "Vixen," Commander Henry Pinkney, on blockade service off the mouth of Tuxpan River. Here in May, 1848, he was boat-wrecked, and drifted out to sea on two oars, which he was fortunate enough to seize on the swamping of the boat. He was picked up, just at night, two hours afterwards, by Passed Midshipman, N. T. West, under the following circumstances: Mr. West was attached to a gun-boat, at anchor inside the bar, from which, on discovering the disaster, he put out to the rescue. But on reaching the vicinity of the wrecked boats, for there were two of them, notwithstanding the peril of the persons clinging to them, while the current of the river was forcing them seaward against a constantly overwhelming surf, Mr. West recognized his only safety from a like fate with those he came to rescue, to consist in keeping his boat bow on until he should have passed the bar, and to then heave to and take them off when they were clear of the breakers. It was in the execution of this manœuvre that when Mr. West's boat was crossing the bar, and perched upon the crest of an enormous breaker, he discovered Dr. Bell a mile away, at sea, who was driven out by the current much more rapidly than the boats to which the others of the wrecked, as many as were not drowned, clung to. Mr. West courageously pursued and rescued Dr. Bell, and at once put about to the rescue of the rest, excepting five, including the two commanders, Harris and Pinkney, who had been swept off and drowned.

Dr. Bell's service in the Gulf Squadron was continued until the summer following the end of the war, when he returned in the "Vixen" to Norfolk, Va., in July, 1848.

Three weeks subsequently, he was ordered to the Coast Survey steamer "Legare," on duty in and about the harbor of New York, and from the "Legare" to the "Jefferson," on the same duty. He was detached from this duty September, 1849, and again ordered to the "Vixen" on a cruise in the Gulf, along the Spanish Main and in the West Indies, which terminated at Washington in June, 1850.

His next service was on the west coast of Africa, on board the flagship "Germantown," which began December, 1850, and comprised two years and four months. This was Dr. Bell's last sea-service.

After a short leave of absence, he subsequently served for nearly two years on board the receiving ship at the Brooklyn Navy Yard; meanwhile, in 1854, he was examined and promoted to Passed Assistant Surgeon. He resigned from the Navy October 30, 1855. Dr. Bell had already become a resident of Brooklyn, before he resigned from the Navy. He now entered upon the active practice of his profession, and was very successful, particularly in the following year, when yellow fever prevailed extensively on Bay Ridge and at Fort Hamilton. His services were of great value, owing to his familiarity with that disease. In conjunction with the late Dr. Elisha Harris, who was at the time Physician-in-Chief of the Marine Hospital, Staten Island, Dr. Bell gave great aid to the citizens in the organization of a local hospital for the care of the poor, and did much to prevent the spread of the disease to Brooklyn.

And here it may be remarked of Dr. Bell that, in the practice of his profession, few persons excel him in the courage to take the responsibility of his convictions, which is well illustrated in the following incident: Having become thoroughly impressed with the non-contagiousness of yellow fever, personally, and knowing the increased danger to life of those affected with that disease by their retention in an infected place, he now had occasion to test the correctness of his conclusion. He was called upon to attend Dr. Joseph Bailey, United States Army, extremely ill with yellow fever, in an infected casemate of Fort Hamilton. Regarding the surgeon's recovery impossible under such circumstances, Dr. Bell had him carefully divested of everything likely to communicate the disease, dressed in clothing which was first thoroughly ironed with irons as hot as practicable short of scorching the clothes; bedclothes treated in the same manner were spread upon a mattress that had also first been thoroughly heated, laid in an easy-going market wagon. To this the patient was carefully transferred. The curtains of the wagon were so arranged as to afford sufficient protection and not to attract attention, and the driver directed to proceed to Fourteenth Street, New York. Dr. Bell proceeded in advance, to the designated house, to make the necessary arrangements, and was waiting when the wagon arrived. He carefully transferred his charge, with his own arms, to the nursing care of Mrs. Bailey, who had received such assurances from Dr. Bell as to satisfy every requisite for the promotion of her husband's restoration to health. Dr. Bailey recovered, and no harm was done to any one.

Although so certain of the non-contagiousness of yellow fever by the person, with proper care, Dr. Bell was then, as he continues to be, no less certain of the danger of *fomites*—clothing and certain kinds of merchandise, particularly ships—that have been exposed to the yellow-fever habitat. He attributed the epidemic with which he was then contending to the proximity of the infected vessels held in quarantine but a short distance from, and in the direct trend of the prevailing southwest wind towards, the Long Island shore, at the Narrows.

The vigor with which he describes the conditions which render quarantine necessary, but its danger to the public when practiced as at that time conducted, is well shown by the following extract from a paper he contributed to Hunt's Merchants' Magazine:

> "Everywhere dense population, misery, want, and filth constitute the source as well as the contagion of epidemics; but at this very day, the first day of September, 1856, almost in the centre of the largest commercial city in the world, is gathered the detritus of every sickly clime, to be crammed in and crowded round the quarantine of New York! Do the rags of Alexandria—for there has been an infected ship and cargo of them at New York quarantine since June last—grow less contagious from the heat, dryness and confinement of the hold of a ship? Do the putrid hides of South America, and the goat skins of Cape de Verde become tanned of their poison by wreaking it on the inhabitants of a populous city? Ay, they do. *One hundred and fifty* of such ships and such cargoes are now surrounded by the bay of New York!
>
> "But, alas for the poor passengers and sailors! They are quarantined; many of them quarantined as are the victims of this relic of barbarism, on the Bay Ridge from Fort Hamilton to Brooklyn.
>
> "Yet these ships and these cargoes are now as they would have been centuries ago; they are as the thirty-feet deep of slime from the table-lands of Abyssinia deposited in the lap of Egypt; as the Hoogly exhaling its putrid remains, or as the gleanings of the Father of Waters, in which crocodiles only can revel; all, all these things lost sight of in the heartless selfishness which dictates a quarantine of persons—a seclusion of the sick and needy. . . . . The barricaders of black death who were infatuated by the hideous terror of judgments inflicted for secret sins, were in some degree excusable in acts measured by the light of science, but that such inhumanity, such remorseless heartlessness and cowardly selfishness should exist and be tolerated now, is the most inconceivable incident of barbarism connected with the present age. . . . .

"Surely every individual of common intelligence can now comprehend the practical truth that pure air is the only real security against epidemics. In all the regulations of quarantine, this prime necessity has ever been overlooked; confinement in a foul atmosphere has been the distinguishing feature of sickly ships, quarantine hospitals and lazarettos, in all ages, everywhere; they convert common fevers into pestilence, which, in their attempts to restrain, they often render contagious, and they are, of all others, the most concentrated foci of disease. They constantly avert the attention of the public from the true precautionary sanitary measures, under the absurd impression that epidemics can be shut out or barricaded like unwelcome visitors."[1]

Similarly, in the newspapers of the time, Dr. Bell persisted in his effort to make the public sensible of the danger from the New York quarantine, as it at that time obtained, until it was destroyed by fire by a throng of excited people, September 1, 1858. The sick, several of them with yellow fever, first being carefully removed and laid on the lawn, and subsequently taken care of in tents, *without communicating the disease to any one who handled them.* Straightway it became an important question, where to find a new site for quarantine. Dr. Bell, making use of his knowledge of the shoals and reefs in the bay, gained while he was on the coast survey duty, ten years before, through the *Journal of Commerce* and other newspapers, urged the propriety of locating it in the lower bay, but no one with influence agreed with him. A State Commission was appointed for the removal of quarantine, but it was obtuse to any practical suggestions.

April 27–30, 1859, the Third National Quarantine and Sanitary Convention was held in New York. With this movement Dr. Bell had already become identified, by a letter which he addressed to the first convention, held in Philadelphia, two years before, comprising the following propositions in relation to quarantine:

"1. Immediate freedom to all well persons.

"2. Warehouses for infected goods with provision for unloading and ventilating such as are found to be so, *immediately* on arrival.

"3. Anchorage ground at such a distance and direction from the warehouses, and all populous neighborhoods, as to endanger no one; and

"4. A Marine Hospital, also at such a distance from the warehouses and anchorage ground, as to be in no danger from them.

"Quarantine on such a basis presents the greatest advantages for health, and the least obstacle to commerce. Well people have their freedom without being kept subject to the causes of disease; sick persons a chance of recovery; merchants their ships in the shortest possible time, and goods their safety."

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[1] Hunt's Merchants' Magazine, vol. xxxv., p. 435.

A signal feature of the New York Convention was the discussion on the contagiousness or non-contagiousness of yellow fever, *pro* and *con*, respectively, by the late eminent physicians, Drs. John W. Francis and Alexander H. Stephens, and others, on a resolution introduced by Dr. Stephens :

"RESOLVED : That in the absence of any evidence establishing the conclusion that yellow fever has ever been conveyed by one person to another, it is the opinion of this Convention, that personal quarantine in cases of yellow fever may be safely abolished."

This question was debated two days. Dr. Bell trenchantly described his experience on board infected ships, at, and in the vicinity of Vera Cruz and in the West Indies, and related his observation of the localities on the west coast of Africa and adjacent islands, where the deadly epidemics, to which Dr. Francis had referred, prevailed many years ago. He laid particular stress upon the local conditions where the disease prevailed, in contrast with the place of final resort of the infected ships to cleanse and get rid of the disease, at St. Helena, *without danger to the people*, because that island was, and continues to be, devoid of fomitic soil.

Dr. Bell followed his remarks by proposing an addition to Dr. Stephens' resolution :

"Provided *fomites* of every kind be rigidly restricted."

This was readily accepted, and the resolution, so amended, was adopted by an almost unanimous vote. Before the convention adjourned, a committee was appointed, of which Dr. Bell was made chairman, to report at the next meeting of the convention (at Boston, June 14, 1860), specific recommendations of principles and measures of quarantine, severally applicable to different diseases and different localities.

The report submitted and unanimously adopted, at the time appointed, comprised sanitary measures in detail, relating to departure, during the voyage and on arrival ; quarantine hospitals and the proper care of the sick ; quarantine warehouses and docks; the proper disposal and care of infected things, and executive arrangements. The late Dr. Elisha Harris was Dr. Bell's chief co-worker.

As a whole, that report has constituted the groundwork of all the most important features of reform in quarantine plants and regulations that have been accomplished since that time.

It was during Dr. Bell's naval service in the Mexican War that he discovered the efficiency of *steam* as a disinfectant. The following interesting account of the discovery, by himself, is extracted from a letter addressed to the late Elisha Harris, M.D., published in the proceedings of the Fourth National Quarantine Convention (1860).

"While I was an assistant surgeon in the Navy, and during the epidemic of yellow fever which prevailed in the United States naval squadron, in the vicinity of Vera Cruz, during the summer and autumn of 1847, the United States steamer "Vixen" was one of the earliest and one of the worst infected vessels of the squadron. This vessel had done a good deal of river and coast service, was filthy, and infested with cockroaches and rats. I was ordered to the "Vixen" from other service in the squadron in the early part of December, and there had charge of the latest cases of yellow fever during that season of the epidemic. During the winter season, while the "northers" prevailed, there was a cessation of yellow fever, though we continued to have a large sick list composed of tedious convalescents, and frequently recurring febrile complaints. On the return of the hot weather at the beginning of the following summer, 1848, there being no immediate prospect of our going north, and in anticipation of an early return of yellow fever in our then fitting condition, it became expedient to 'break out,' as far as practicable, while on service, and paint the ship. Before undertaking this, the commander, James H. Ward, resolved on a final effort for the extermination of the vermin, by *steam.* Everything susceptible of injury was taken on deck, the hatches closed, and steam turned in below decks. This was kept up for two or three hours, and with such a head as to completely permeate every crevice. After steaming there was a thorough scraping, whitewashing and painting. From this time forward there was a decided improvement in the health of the crew; *no more fever cases occurred.*

"About a month subsequent to the steaming of the "Vixen," the gun-boat "Mahones," Commander William D. Porter, having been on a surveying expedition up the Tuxpan River, returned to the anchorage at the mouth of the river, and telegraphed for me to visit the sick. The "Mahones" had no medical officer. There I found three cases of yellow fever, and within a few days four others. The "Mahones" was a captured vessel; had never been off the coast; was filthy, and infested with vermin. The salutary effects of the steaming on board the "Vixen," both for vermin and *fomites*—no unusual associates, by the way—were so apparent that the same process was forthwith advised and applied, by means of the "Vixen's" engine, to the "Mahones," and, as in the first case, vermin and fever both ceased to live.

"These vessels continued on service in the vicinity of Vera Cruz until the following August, when they both came to Norfolk, in the very height of hot weather. The "Mahones" was there laid up, and subsequently sold; and the "Vixen," after remaining three weeks, without 'breaking out,' was transferred to the coast survey service in the Chesapeake Bay, for the remainder of the summer. In neither of these vessels was there any return of the fever.

"About the same time that the 'Vixen' and "Mahones" arrived at Norfolk, the frigate 'Cumberland' and the steamer "Scorpion" arrived at New York. The 'Scorpion' was at once put in quarantine on account of recent cases of yellow fever on board; and the 'Cumberland,' not having had any cases since the previous season, was, after a few days' delay, permitted to go up to the navy yard; but on the beginning of the work of 'breaking out,' yellow fever also broke out on board, and she was ordered down to quarantine until cold weather. The 'Cumberland' and the "Scorpion' were from the same squadron with the 'Vixen' and 'Mahones," but more commodious, better ventilated, and in every respect in better condition for health, except that they *had not been steamed.*"

Dr. Bell has been a persistent advocate of steam as a disinfectant ever since his first use of it, as such, to the infected vessel "Mahones," and is fully entitled to the credit of introducing this valuable method of disinfection into practice. During the interval, he and others who have followed his directions, have many times repeated the process and demonstrated its efficacy by the results, holding, as long ago as, and ever since 1862: "That inasmuch as a temperature of 145° F., which coagulates albumen, effectually disinfects the worst fomites, we have in this fact alone, strong evidence of the identity of the virus with organic matter."[2] A proposition which biologists, with no practical experience in dealing with the infectious diseases, wholly disregarded, until about five years ago. Basing their opinions upon mere laboratory experiments with germs of no known relation to infectious diseases, they have claimed for effectual disinfection the superiority of dry heat, and the necessity of a degree of temperature, 300° F., and upwards, destructive to most fabrics. But at the meeting of the American Public Health Association, at Memphis, Tenn., 1887, the Committee on Disinfectants, Dr. George M. Sternberg, United States Army, chairman, after several years diligent study and experiment, reported among other conclusions:

"A temperature of 62° C. (143.6° F.) is fatal to all of the pathogenic and non-pathogenic organisms tested, in the absence of spores (with the single exception of *sarcina lutea,* which in one experiment, grew after exposure to this temperature)."[3]

Since the publication of that report most of the sea-ports of importance in the United States which had previously provided disinfecting plants for the use of other means, have elaborated them so as to include steam; and several new ones, particularly by the Marine Hospital service, have been undertaken with more elaborate provision for the use of steam than ever before. But none appear, as yet, to have comprehended the disinfection of vessels, as well as textile fabrics by the same means. Notwithstanding that, at the same meeting at which the report of the Committee on Disinfectants was submitted, in addition to the several previous instances he had reported the disinfection of vessels by steam, without injury, Dr. Bell reported the effectual disinfection of the immigrant steamship "Britannia," of cholera, at the New York quarantine, only a few weeks before, October, 1887.[4]

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[2] Transactions Medical Society of the State of New York, 1864.

[3] Public Health, vol. xiii., p. 98.

In the first year of the Civil War, the New York Commissioners of Quarantine, in anticipation of increased danger from yellow fever, employed Dr. Bell as medical superintendent of the floating-hospital for the special care of yellow fever, in the lower bay. In the exercise of this duty, he still further demonstrated the truth of his conviction of the non-contagiousness of the disease by the person, by having his wife and young children visit him on board the hospital-ship; and also, by permitting the wife of a naval officer, who died with black vomit, to be with and nurse her husband for a week before he died, to be present at the burial, and to return and remain on board the hospital-ship a week after his death. Moreover, we are assured by Dr. Bell, that there has been no instance in the history of the floating-hospital, for the care of yellow fever, at the Port of New York, of any nurse or other person having contracted the disease on board.

It seems hardly necessary to state, however, that the arrangements for the prompt disposal of the excretions of the sick, and the most scrupulous cleanliness in all respects have been exacted from the outset. But with regard to the danger and proper care of merchandise, at the conclusion of his service as medical superintendent of the floating-hospital, November, 1862, Dr. Bell reported to the commissioners:

"Everybody knows that it is not safe to store infected cargoes in city warehouses during the summer, while in the face of this without any other provision, the law provides that the merchant cannot have his ship until twenty days after the cargo is discharged. My past summer's service confirms my previously expressed judgment, that since Sandy Hook seems to be out of the question, we have on the shoals of West Bank ample space for a quarantine establishment, without the possibility of objection from surroundings. The objection to West Bank would, perhaps, be the great cost of suitable structures. This would in the long run, as compared with Sandy Hook, even admitting the possibility of ultimately obtaining that situation, be compensated for by the greater convenience of West Bank to the city. And, even supposing such a structure to cost half a million dollars and built by the subscription of merchants, the amount would then be small as compared with the burdens they have sustained by the detentions of the present system"[5]

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[4] Ibid, p. 387.

Shortly after that report was made, on the request of the late Hon. Henry C. Murphy, member of the State Senate at the time, Dr. Bell suggested the terms of a law comprising the practical conclusions deduced from the report of the Committee on Quarantine Regulations, from the proceedings of the Fourth National Quarantine Convention, 1860, and designated West Bank, in the lower Bay of New York, as the site. And here, it may be remarked that, under the head of sanitary measures, *steam* is particularly designated. His suggestions were formulated into a bill by Mr. Murphy and submitted to the legislature. Everything comprised was approved of, except the site—it found but little support. The passage of the bill with that clause in and without a mischievous provision of the old law (Sec. 9 of the law as passed) for the interminable detention of vessels, was found to be impracticable. Hence the friends of the measure did the next best thing they could do, namely, inserted, instead of West Bank, "in such place in the lower Bay of New York, not on Staten Island, Long Island nor Coney Island, as the Quarantine Commissioners may determine,"[6] including the bad section referred to. As thus modified, the bill was passed. This was the law of 1863.

Dr. Bell advised that, with the exclusion of all other places, on the next recurrence of an epidemic similar to that of 1856, or of cholera which threatened, it would be possible to reinstate the provision; and that, with regard to the antiquated section, with the establishment properly situated and appointed, as the law otherwise contemplated, it would speedily become a dead letter. So it came to pass. Epidemics became more and more threatening.

In 1864, Dr. John Swinburne, of Albany, was appointed health officer. He forthwith entered upon the duty with great energy, determined at the outset, apparently, to reëstablish the quarantine somewhere on Staten Island, but his attempts were met with injunctions and fire; he could gain no foothold. He next attempted Coney Island; here, too, he was met by an injunction, which, by the effort of Dr. Bell and Mr. Murphy, was made permanent. Meanwhile, infected vessels with yellow fever, cholera and smallpox arrived; and quarantine was made more burdensome to commerce than it had ever before been.

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[5] The Sanitarian (1873), vol. i, p. 27.

[6] Senate Bill, 365, 1863.

In 1865, Dr. Swinburne, not appearing to have any knowledge, or who for other reasons wholly ignored the action, of other persons and the designation of West Bank in the original bill, as the site, recommended to the legislature the erection of warehouses near the Horse Shoe, on Sandy Hook. The outcome of this recommendation was the appointment of a temporary Board of Commissioners, charged with the special duty of examining and reporting upon the most feasible plan for locating the warehouses for the permanent quarantine establishment. As the result of their investigations, they recommended West Bank as the most suitable site "provided Sandy Hook could not be secured for the purpose."[7]

By subsequent act of the legislature, the following year, April, 1866, the said Board of Commissioners were directed to proceed and cause to be erected the necessary structures on West Bank, in the lower Bay of New York, the place first designated by Dr. Bell in the original bill. The construction proceeded. The hospital was first occupied, in part, in 1869; and, in honor of the individual who claimed the credit of the site of the establishment, after he had been driven to its adoption as a dernier resort, it was named by act of the legislature, "Swinburne Hospital."

1870–73, Dr. Bell was, by appointment of Governor Hoffman, Supervising Commissioner of Quarantine. The hospital was equipped, and the walls of the buildings on Hoffman Island were constructed under his supervision. His term of office expired during an interval of comparative exemption from imported epidemic diseases, and those who succeeded him and his associates in office appear to have been passive, or, at least, lukewarm, with regard to requirements for the future. At any rate, all work on the structure was soon thereafter suspended. Subsequently, however, after a period of about ten years and another round of official changes, in view of the menacing attitude of epidemics abroad, the officers in charge appreciated the necessity of repairs and equipment, and urged their importance upon the legislature. But, on account of political discord between the governor and the legislature, all attempts to make appropriations were vetoed by the governor at the imminent risk of the health of the state and the nation. Consequently, on the arrival of the emigrant ships, "Alesia" and "Britannia" infected with cholera, in the summer of 1887, the establishment was not only almost wholly devoid of means to contend with it, but Hoffman Island, the place of detention, was in such a state of decay as, seemingly, to be a possible means of propagating the disease, instead of arresting it; insomuch that during the first period of four weeks detention of the "Alesia's" 600 passengers on it there had not been an interval of five days without the recurrence of one or more new cases.

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[7] Official Report, Commissioners Quarantine, Dec. 30, 1865.

It is to the credit of Health Officer Smith in this emergency, that he called upon Dr. Bell for assistance. According to the report made to the American Public Health Association shortly thereafter, Dr. Bell quickly comprehended the situation, and effectually met it. He said to the health officer: "You will never get through with these people until every one of them susceptible to the disease takes it, unless you disinfect everything in one day." Dr. Bell was requested to proceed. Here we have an illustration of the quick apprehension and prompt action which constitute the most essential qualities of the practical sanitarian.

Within one week Dr. Bell had secured the use of an iron box about nine feet in length and six feet each of the other dimensions, of sufficient strength to resist steam pressure. He ordered this to be taken to Hoffman Island as soon as practicable. Just as he was about to ship it he received a message from the health officer directing that it first be sent to the "Britannia," "Certainly not," was the prompt reply; "steam the clothing of the people on board the "Britannia" and the ship, in position. Make a receptacle of her steerage; put all the clothing and baggage of all on board into it, and steam the steerage with the ship's own engine."[8] She had had three cases of cholera on board since her arrival three or four days before. Disinfection was at once proceeded with in the manner suggested; and the next day all the passengers were required to change their clothing, put on that which had been steamed, and that which they removed from their persons was put through the steaming process; subsequent to which time there was not another case of cholera on board or among the passengers after they were removed. Meanwhile, the steam-box was put in position on Hoffman Island, for the clothing of the "Alesia's" passengers. It was filled with baggage on wooden gratings, avoiding contact of the clothing with the sides of the box. A registering thermometer was put in, the box closed and steam turned on from a boiler under sixty pounds pressure. The escape valve (of the box), adjusted to seven-and-a-half pounds pressure, was sprung in less than one minute. At the end of fifteen minutes steam was shut off and the door opened. The thermometer registered 230° F. The same process was repeated several times, until in less than twelve hours from the time it began, all the clothing and baggage of the whole 600 immigrants, not on their persons, was passed through it; and on the following day, they were all required to remove the clothing they had on, to wash themselves thoroughly, and to put on clothing that had been steamed the day before. *There was not another case of cholera among them.*

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[8] Public Health, vol. xiii, p. 306.

After three weeks longer detention on Hoffman Island, and ten days on board a clean ship procured for the purpose (to satisfy the scruples of the New York Health Department), they were allowed to proceed. The "Britannia's" passengers were transferred to Hoffman Island on the same day the "Alesia's" left, and there detained for two or three weeks, but, as before stated, without any recurrence of cholera.

Soon after the organization of the National Board of Health, June, 1879, Dr. Bell was chosen as one of the Inspectors of Quarantine, and assigned to duty on the Atlantic coast from Brunswick, Georgia, to Norfolk, Virginia.

From the outset of his service he secured the coöperation of all the authorities with whom he had to do, in the exercise of his office, for such changes as he deemed necessary to protect them against the importation of yellow fever, which was at that time prevailing in Havana and other ports in commerce with the United States.

When he had proceeded up the coast from Brunswick, Ga., as far as Wilmington, N. C., in August, he was telegraphed to, to meet the Executive Committee of the National Board, at Washington, as soon as practicable, the purpose being to confer with him on the practicability of preventing the escape of yellow fever from New Orleans, and to stamp it out there as soon as possible. The committee was already familiar with Dr. Bell's views on "Quarantine Measures relating to Departure," in the presence of infectious diseases, as expressed in the report of the committee of which Dr. Bell was chairman, at the Fourth National Quarantine Convention already referred to. It will be sufficient to state here that, in less than twenty-four hours from the time of the interview, Dr. Bell was on his way to New Orleans, to carry into effect his definitely expressed views. He was given all the assistance he required by the National Board, six subordinate medical inspectors. And there, as elsewhere, he quickly secured the welcome coöperation of the health authorities. In less than a week circular letters were sent by the Board of Health to all the owners, agents and masters of vessels and boats of every class, requesting that every vessel or boat before departure, be reported to the Board of Health, and, if possible, before taking cargo or passengers on board, for inspection;

that no employé or passenger be engaged until after receiving a certificate of inspection, by officers duly designated, and that all such from that time be retained; and that no freight or furniture, deemed to be dangerous, should be received. Meanwhile, Dr. Bell and his corps of inspectors were systematically engaged in examining all the vessels and boats at the wharves and in the basins, as well as those about to depart, and directing their purification.

Within three weeks from the time Dr. Bell entered upon this service, the first of its kind, the quarantine against all river boats and coast traders had been "raised"; they were allowed to proceed to St. Louis, Cincinnati, and all other places without restraint, because they were known to be no longer dangerous; and in less than six weeks, New Orleans was declared free from yellow fever.

Dr. Bell was then directed to proceed to Vicksburg, Memphis, and other places up the river, but his services had been so highly esteemed by two members of congress from Louisiana, Hons. Randall Gibson and King, in New Orleans at the time, that, upon their request, lest his services there be again required, New Orleans was made his headquarters for a month longer, during which period he inspected the quarantines from New Orleans to Mobile, and designated Ship Island as the best place, all things considered, for a national refuge station.

As an illustration of the thoroughness of his work, and as also apropos to recent discussions and conclusions by biologists and others, with regard to the use of *sulphur as a disinfectant*, and the quantity necessary to be used, the following extract from his report on Quarantine at New Orleans, is especially worthy of attention:

> "I also availed myself of the occasion to accompany the health officer and his deputy to visit the ship "Black Prince," which had arrived in ballast three weeks before, infected, from Havana, and which vessel, having passed through the usual processes of cleaning, and twenty days' detention, was now through her consignees pressing for *pratique*. I was informed that the common practice is to require all sand ballast to be discharged; stone is permitted to remain. Of this latter there was a goodly quantity on board, well spread over the bottom of the hold. The bilge had not been examined and of its condition there was no knowledge, except by the offensive odor of the pump-water when she first came in, to destroy which the health officer had ordered three gallons of pure carbolic acid (impure coal-tar creasote), to be poured down the pump; and she had been pumped out several times since. The hold had also been sprinkled with a solution of carbolic acid, one part to four parts of water, and twice fumigated with sulphur, ten or twelve pounds at a time, for three hours—frequently looking in the while to see that no damage was done by fire. The

cabin and forecastle had both been fumigated with four or five pounds of sulphur; but no pains had been taken to have the closet doors opened or bedding exposed, otherwise than as it lay in the bunks; there was an uncertainty whether the outer doors were closed during the process.

"The vessel was reported by the captain to be twenty years old, and she had evidently had much hard usage, with little or no attention to cleanliness. She had much rotten wood saturated with dirt. On having the ballast shifted from either side of a longitudinal partition, hollow—the width of the keelson—resting on the dunnage plank, was found to be filled with exceedingly offensive dirt, insomuch that, on lifting a floor-plank, and knocking off a bottom board from the partition, the mal-odorous dirt shaken down by the hammering, covered the keelson and filled the bilge as fast as it could be removed. There was a faint odor of carbolic acid in the filthy *débris* near the pump, but everywhere else the odor of bilge-water prevailed.

"I recommended to the health officer to have all the filth that could be, removed from both sides the keelson, and from the limbers; to use a solution of copperas freely through the pumps, and otherwise, until the bilge was devoid of odor, and (having roughly estimated the cubic capacity of the hold to be about 130,000 cubic feet) with the bilge still exposed, to have all the ports closed and fumigate with sulphur, a barrelful at one time, distributed in a sufficient number of kettles, protected against fire by being set in vessels of water. After setting the sulphur on fire, to close up as tightly as possible for twenty-four hours. For cabin and forecastle, remove and destroy all worthless material, open all closet doors, chests, and boxes, loosen out or hang up all bedding and clothing, and after closing up all port-holes, disinfect with sulphur in the same proportion as for the hold, *three pounds to every 1,000 cubic feet*, for twenty-four hours. This has been my usual practice and instruction in the use of sulphur, with a view to actual pressure and penetration of the acid into all porous as well as open spaces, and as much absorption as possible by the bilge-water and filthy mud out of sight, between the timbers; and for such length of time as may reasonably be supposed sufficient for the destruction of all organic matter. living or dead, and the complete transformation of the emanations therefrom."[9]

From New Orleans, Dr. Bell proceeded to Vicksburg, where his services were particularly useful in reconciling differences between the National Board of Health and the civil authorities, with regard to the use of funds. Next he proceeded to Memphis, where he organized and instituted the house-to-house inspection service—from cellar to garret—which resulted in the purification of that city. On leaving New Orleans, Dr. Bell took with him a letter and petition to the National Board of Health, signed by all the shipping merchants and many others engaged in commerce, expressing their approbation of and satisfaction with the sanitary measures relating to departure, and requesting the continuance of the same in the future.

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[9] Report of the National Board of Health, 1879, p. 464.

Dr. Bell's contributions to literature, besides the work referred to at the beginning of this article, have been numerous and chiefly on, or closely related to sanitary subjects, in part, namely: An octavo volume on the Climatology and Mineral Waters of the United States, published by William Wood & Co., New York, 1885.

While yet in the navy, in 1854, he became a contributor to the *Nautical Magazine and Naval Journal* on several subjects relating to the health of seamen.

To *Hunt's Merchants' Magazine*, 1856 to 1861, a series of papers under the caption of "Garblings, or Commercial Commodities Characterized," comprising the adulteration of food and liquors; and several articles on ship sanitation.

To the *American Church Monthly*, "The Goodness of God Manifest in Disease" (1857), re-written in the concluding chapter of "Knowledge of Living Things," referred to.

To *Harper's Magazine*, "Civilization and Health" (1858); *The North American Review*, "Rival Systems of Heating" (1884).

To the *Proceedings of Kings County Medical Society*, an oration on "Sanitary Reform" (1860); an oration on "Medical Progress" (1870), and numerous reports and papers, during an interval of more than twenty years, being the while one of the visiting physicians of the Brooklyn Hospital.

To the *Transactions of the Medical Society of the State of New York*, 1862–1887, "Malignant Pustule;" several papers on Marine Hygiene, Disinfection by Steam, and Quarantine; Soil Drainage and School Hygiene; two prize essays, "How Complete is the Protection of Vaccination, and what are the Dangers of Communicating other Diseases with the Vaccinia" (1864), and "The Physiological Conditions and Sanitary Requirements of School-Houses and School Life" (1887). To the *Transactions of the Epidemiological Society*, London, on the "Cause, Malignancy and Persistency of Yellow Fever on Board Ship" (1865). To the *Transactions of the American Medical Association*, papers on Vaccination, Yellow Fever, State Medicine, Waste of Life, Disease carried by Milk, Soil Drainage, Hemlock Poisoning, Introduction of Disease by Commerce, Tuberculosis in Milch Cows, Sanitary Bureau, Unsanitary Engineering and Architecture, Emigrant Ships, Stamina, Beneficence of Disease, etc., (1865–1891).

To the Fifth Annual Report of the *State Board of Charities*, N. Y, the "Relation of the Sanitary Condition of Towns, and the Crowding

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of Population into Filthy, Ill-ventilated and Badly-drained Tenement Houses to Pauperism, Vice and Crime" (1876). To the *International Medical Congress*, the "History, Practical Application and Efficiency of Steam as a Disinfectant" (1887). To the Transactions of the *American Climatological Association*, the "Influence of an Ocean Atmosphere on a Staid Population, with Special Reference to Pulmonary Consumption," (1889).

As an active member of the *American Public Health Association* from its origin, Dr. Bell has largely contributed to its proceedings, as nearly every volume of its published transactions attest; discussing especially school hygiene, sanitary inspection, epidemic diseases, disinfection, quarantine, emigrant ships, practical sanitation and preventive medicine in its various aspects.

In 1873, Dr. Bell established *The Sanitarian*, a monthly magazine devoted to the interests of public health. To this magazine he has given the labors of the later years of his active and eventful life. Every number contains the mature fruits of his extensive studies in sanitary science, and his experience in practical sanitation of ships, quarantine, institutions, dwellings, persons, etc., in the form of elaborate papers, reviews and criticisms. The twenty-seven volumes of this work now published, probably constitute the most comprehensive work, dogmatical and critical, on practical sanitation and preventive medicine extant.

Dr. Bell is a member of many societies, viz: N. Y. State Medical Society; N. Y. State Medical Association; American Medical Association; American Public Health Association; American Climatological Association; Kings County Medical Society; Kings County Medical Association; N. Y. Medico-Legal Society; Honorary Member Connecticut State Medical Society; Corresponding Member Epidemiological Society; London, etc. His degree of A.M. is honorary. It was conferred by Trinity College, Connecticut, 1859.

A FEW REMARKS UPON THE BRANDT SYSTEM OF TREATMENT OF THE DISEASES OF WOMEN.

BY WILLIAM MADDREN, M.D.

Read before the Brooklyn Gynæcological Society, Dec. 4, 1891.

Mr. President and Fellows:—I must preface what I have to say, by stating that I feel incompetent to treat this subject as a whole—upon its merits—because I know but little of the gymnastic, or the massage method of treatment. My object is more to bring the subject for consideration and discussion before those who have a larger field and more experience, than to advance my own views. I have, however, had enough experience to make me desirous of knowing more about this system.

In looking over the subject as given by Brandt in his "Treatment of the Diseases of Women," it is evident that he sees only with the eye of a man with one over-mastering idea.

The following are some of the ailments that he claims to have cured by his method:

Prolapse of the uterus.
Prolapse of the vagina.
Prolapse of the rectum, either partial, complete, acute or chronic.
Incontinence of urine following labor.
Floating kidney.
Displacements of the uterus.
Abnormally large or small uterus.
Adhesions to the pelvic wall.
Adhesions to the rectum.
Cervical catarrh and ulceration.
Menorrhagia.
Swelling or enlargement of the ovaries.
Oöphoritis and peri-oöphoritis.
Dislocated or adherent ovaries.
Salpingitis.
Hydrosalpinx.
Displaced or adherent Fallopian tubes.
Swelling and enlargement of the broad and other ligaments.
Inflammations and exudations in the pelvis of various kinds.

The Brandt method may be described as a course of daily gymnastics, general and local. The general treatment consisting of:

Chest movements.
Movements of the limbs—the upper and lower, alternately.
Movements of the trunk muscles.
Movements of the inner parts of the abdomen—the pelvis.
Movements of the head and neck.
Movements of the lower limbs.
And, finally, a respiratory movement.

The local or pelvic treatment consists of:

Lifting the uterus, which has been grasped through the abdominal walls.
Bimanual manipulation.
Stretching of adhesions or shortened parts.

Double pressure or massage.
Vibratory pressure.
Circular movements.
And lumbo-sacral percussion.

In manipulating, it is his rule to try to draw the blood more or less away from the pelvis by stroking movements, unless the patient suffers from scanty menstruation or amenorrhœa; and he uses stroking movements *toward* the part where the nervous or vascular activity is relatively less vigorous.

He sums up his method of treatment in these words: "Taught by long experience that women affected by genital diseases almost always suffer also from other disturbances, I would not be willing to dispense with auxillary remedies, general movements, and hydropathic treatment."

Thure Brandt is earnest and bold in his methods and measures; we read of him deliberately treating cases of hydrosalpinx by stroking or massage, with the view of emptying the tubes, by way of the uterus, if possible, but into the abdominal cavity if necessary, and he states that he has lost no patient by his treatment. Such procedure involves the ability to make a very fine diagnosis, and makes one think that the contents of the distended Fallopian tubes must be much less harmful than has been generally supposed. During menstruation he continues, with some precautions, both general and local treatment Painful swellings of the ovaries, ligaments and other parts, he relieves by means of massage.

These, and other procedures, seem almost revolutionary, yet Thure Brandt's writings impress one with the belief that he is thoroughly in earnest, conscientious in his convictions, painstaking, and trying to state facts as they appear to him.

Undoubtedly each of us has been called upon to treat a number of cases where the uterus has been more or less firmly fixed or displaced, the result of preceding inflammation in the ligaments, or the surrounding tissues.

Before reading of the Brandt system, I had found that in certain cases I could relieve pain, and improve the function, by lifting the displaced uterus and by stretching the contracted ligaments, adhesion, etc. I also found that it was easy to do harm, and that it was necessary to select those cases for this treatment that were free from inflammatory action as indicated by the thermometer and by other means.

It seems to me that the cases which derive the greatest benefit from this treatment are those in which adhesions have bound the uterus and other parts out of place, producing pain, disturbances of function, or sterility. Pain, I believe, can almost always be cured. In fact, the kindly influences of time in untreated cases, has, I suspect, much to do with the slow and gradual stretching of the contracted or the adherent parts. Functional disturbances may be largely helped, and sterility—of these conditions, the least amenable to treatment—can occasionally be remedied.

Let me, in closing, give you a few of Brandt's conclusions:

"As a matter of course, local treatment of the pelvis should be instituted only when pain or other symptoms are present; sterility forms the only exception to this rule.

"In many cases the true interests of the patients are not subserved by discontinuing the treatment as soon as the pains cease. It is better to continue the treatment a little longer, partly in order to obtain a possible improved position of the uterus, partly in order to be certain that the improvement is permanent.

"It is often found that patients who suffer from uterine displacements, attended with more or less severe pelvic disturbances, are freed from the latter after a short period of treatment, although the position of the uterus remains abnormal. The treatment might then be regarded as successful if the patients felt permanently well, but it cannot be denied that there is a tendency to relapse in such cases. For this reason I am rarely satisfied with the disappearance of the symptoms, but always attempt to restore the organ to its normal position. This is, by no means, always possible."

He says, I think erroneously, "it is to be assumed that electricity is useless, inasmuch as the method has not met with general approval." He also says: "In my opinion the only rational treatment consists in relieving retractions, congestions, exudations, etc., by means of massage, stretching and pressure movements, and, on the other hand, in attempting to stimulate the paralyzed and elongated ligaments to contraction by means of lifting movements."

DISCUSSION.

Dr. RAYMOND:—I would like to ask, Mr. President, whether Brandt is a regular physician—is he a graduate in medicine?

CHAIR:—He must be, because he could not practice in Sweden if he were not.

Dr. RAYMOND:—He might practice massage.

Dr. MADDREN:—He does not claim to be a physician, but simply a gymnast.

Dr. RAYMOND:—I am quite sure that I have seen somewhere that he is not a physician, and that that has been his difficulty; that he has not been able to bring his treatment before the profession, they taking it for granted that everything he did was charlatanry. It was a long time before he could get scientific men to look into his methods at all.

Dr. SKENE :—His methods are certainly accepted in the literature of medicine of other countries than his own ; in our own literature we have numerous references to his methods.

Dr. MADDREN :—He has been endorsed to some extent by Swedish and German physicians by being invited to lecture, or to be present and give instruction in some of their institutions ; but that is only of very recent date.

Dr. RAYMOND :—What struck me in the doctor's paper, as it evidently did him, was the number of diseases cured by this method, and it seemed to me that a man, not a physician, might have some difficulty in making these diagnoses, which, if I am not mistaken, trouble some of the most expert gynæcologists.

Brandt's method, so far as I know, has not come before the profession until very recently, and I am not even now sufficiently well informed to know whether it is recognized by the profession on the other side as a regular method of treatment. The method came to my attention in a casual way some year or so ago, and I never paid much attention to it. I never have used it, and in fact, until very recently, have not been at all familiar with the peculiarities of it. It occurs to me that it is a method which needs to be investigated very thoroughly by scientific men before it receives general acceptance. The foundation for any treatment, if I am not mistaken, is a correct diagnosis, and a method which claims so much as this method does in the relief and in the permanent cure of diseases which eminent scientific men in the profession have always regarded as incurable, will certainly throw a great deal of doubt upon the results of any one, and particularly of a man who makes no claim to be a physician, and who, so far as I know, has never had a thorough medical course.

That this method could be applicable to all of the cases referred to by the doctor, seems also claiming a great deal. Brandt claims that acute inflammatory troubles can be greatly relieved by his method of manipulation. That pain will be always relieved or greatly lessened, may undoubtedly be true, especially where there is exudation ; but that in acute inflammatory troubles a bimanual manipulation, sometimes with the finger in the vagina, and at other times with the finger in the rectum, with the other hand performing massage through the abdominal wall will relieve pain, is a statement which I think requires to be accepted with a great deal of care. From what I know of the literature of Brandt's method, it seems to me that we are not in a position to say just how much can be attributed to it in the way of beneficial treatment; that it is applicable to the cases of old exudates there is undoubtedly a good deal of evidence, but that it can be applied in acute inflammatory troubles, or in many of the troubles he instances, I have grave doubts.

Dr. McNaughton:—Dr. Raymond has expressed my views very thoroughly. I believe there are a class of cases that may be treated in that way with benefit, but with Dr. Raymond I think there would have to be a most excellent diagnosis made, throwing out all cases where there is even a sub-acute inflammation or where there is fluid of any kind, either a hydrosalpinx or pyosalpinx. I have seen and opened several uteri where the Fallopian opening was certainly so small that nothing could have been pushed through it—I think the sac would have ruptured before the contents could have been pushed through into the uterus. If cases could be selected in that way, throwing out all those conditions, I believe it would do good just by stretching the tissues and accustoming them to the changed conditions. I had a few years ago a case of a young lady with an enlarged ovary—it was very distinct and down as far as it could go. She came down with an attack of whooping-cough, and I supposed of course the conditions would have been made worse by it. Very much to my surprise, when I examined her after the attack of whooping-cough, the ovary had disappeared and I have had no trouble with it since. I presume that it was the gymnastics of the pelvic organs that relieved her. I think this method is worth looking into, but I believe the cases are very limited, and the men capable of doing it are very few, because it requires a peculiarly delicate touch and a great deal of care.

Dr. Hyde:—I had come entirely unprepared to say anything tonight, as it is my first evening here with you. In what I have read of Brandt's system in medical literature, I have been profoundly surprised that a man who has no status as a practitioner should have been able to attract the attention of the medical profession throughout the world as much as he has done. If Brandt did not claim so much it would be within reason for the medical profession perhaps to sanction some of his beliefs, or at least give them a fair trial. If he claimed nothing further than gymnastics and massage to improve these cases, we might be willing to accept something of his theory. We all meet with gynæcological cases of young girls or ladies that seem to give us considerable annoyance, but a prolonged vacation, where they have plenty of open air and exercise, rowing and walking, and the generally good hygienic conditions of a country outing, brings them back to us vastly improved, and apparently, with all their local difficulties gone; so we are prepared to accept so much of Brandt as simply involves good hygiene and outdoor exercise and gymnastics, but I do take exception most thoroughly to some of his claims It is impossible for us oftentimes ever to know just what is the condition of our patients, and for him to claim to cure all these cases with massage, is something perfectly wonderful—the best men in the profession could not do it, and do not claim to do it, with anything like the general success which he claims for his treatment—for he claims hardly anything but success. I also certainly take exception to his statement in regard to electricity, for in my own practice I am sure that I have derived wonderful benefits from the use of electricity in some of this very class of cases which he speaks of treating by his massage method, and in which he expressly decries electricity.

Then over and above all this, it seems to me that there is perhaps a moral element in this treatment which he suggests for general use. Whatever might be proper in a well educated and competent physician, in the way of massage in these cases, where possibly it might be a benefit in some of these pelvic conditions, it strikes me that any indiscriminate use of it by persons outside of the profession, as I believe Brandt to be, is making a precedent which is all wrong morally.

Dr. LANGSTAFF:—I think, Mr. President, that if this massage treatment would keep up a relaxed condition of the bowels it would be one element in favor of the treatment. As to the merely moral view, I should think that the method would not be used very frequently by the majority of physicians.

Dr. CHASE:—Mr. President, perhaps it is presumptuous for me to say anything on this topic of which I have so little knowledge, but I cannot escape the impression that the claims which Brandt makes are very much like those put forth by specialists who are entirely outside the medical profession. I have a very vivid recollection, when I was a young man, before I entered the profession, of extravagant assertions by the hydropathists, who believed, in the community where I lived, that all the ills flesh is heir to, were capable of being successfully treated, not by hydropathy only, but by the use of cold water, and I should be prepared to accept Brandt's assertions with about as much likelihood of benefit as I would the universal use of cold water as a therapeutic agent or of some other exclusive dogma. I think an intelligent practitioner will appreciate the value of manipulation of the uterus for the relief of inflammatory exudations and of adhesions about that organ, but to expect very much beyond that is presuming a great deal. It is not physiological except so far as it aids or supplements normal movements which might be impossible because the patient was unable to take proper exercise. As has already been alluded to, it seems to me for general use outside of the profession, it is indelicate, and that few in the profession would think of resorting to it for the many differing and diverse conditions recommended by Brandt. I believe sir, it will be a long while before the medical profession will accept very much from the methods of such men, certainly not until the utility of their methods is demonstrated.

Dr. Emery:—I have nothing particular to say more than has already been said, except perhaps to make a few general observations. Before we throw aside this subject and dismiss it in a summary way, it seems to me well for us to recollect that there is an element of truth in it, and perhaps we should consider it in that light and adopt the method wherever we can in our practice.

Of course you must know that in general massage we stimulate the secretions and the circulations, primarily perhaps the circulation, and secondarily the secretions, promoting the absorption of foreign material, the results of inflammation, and we should expect naturally to do that in the pelvic organs as well as elsewhere. I should say that the indelicacy and the moral side of the question should always be considered, and yet with all that I think in many of our cases which puzzle us and seem to defy our skill in every way in which we can turn it to such cases, we might bring something of this kind to bear and it would be one more trial and one more corner for us to get around and press against to bring out the desired end for which we are working. I do not know how it is with the rest of the profession, but as I run across and meet many of these massage people, I believe that perhaps it would be well for us to instruct our patients in a general way in regard to massage more than we do, and I would utter a protest to the general use of massage by these Swedish people, the more so, perhaps, because I have a patient that I have observed for some time with an internal tumor, although I have not determined the nature of it. Previous to my seeing her a *masseur* was employed who determined in a very few moments what the trouble was and proceeded to treat her and nearly killed her. She then sent for me and I suggested that in future if she wanted treatment, she should have it done under the advice of a competent physician.

Dr. Butler:—I have not much to say except that I am a little more in sympathy with Dr. Emery than with some of the other speakers. Because this method of treatment, or therapeutic resource, originated with some one outside of the medical profession, is to my mind, no reason why we should not derive what benefit we can from it. Brandt may not be a physician, yet he is said, from the testimony of competent eye-witnesses, to possess skill in the diagnosis of pelvic troubles which many practitioners do not possess. Doubtless he claims too much. This is a failing not monopolized by the laity. His claims do not appear unphysiological. We know the effects of general massage in a partially ankylosed joint, and that long-continued efforts will finally restore that joint to a fairly useful condition. There is something analogous to my mind in the contracted utero-sacral ligaments or peritoneal adhesions which bind the uterus in the position of retroversion. These ligaments do become relaxed, thus allowing the uterus to prolapse, and there is nothing unphysiological in employing massage for its weakened supports. As to the indelicacy, there is no doubt whatever that the method is not fitted for use outside of the profession. I can second that most heartily. Until three or four weeks ago I had not seen the method practiced at all, and I had the same feeling in regard to its indelicacy as shown by the majority of gentlemen who have spoken to-night; but I then had an opportunity of seeing the practice of this method of treatment by a member of this society, who has paid some attention to it, and to my mind it is not more indelicate than the ordinary bimanual examination. The vaginal finger simply fixes the structures in the pelvis for the external hand to work upon; there is practically less motion of the internal finger in Brandt's method than there is in the ordinary bimanual examination. The case I saw was a very favorable one for the work; the patient was spare, the abdominal walls sank in easily, the uterus could be readily felt by the bimanual touch, the contracted utero-sacral ligament could be plainly traced and very easily masséd by the external hand. As a matter of fact in this case, taking the testimony of the gentleman who showed me the case (and it is as reliable as any I know), there has been a very marked improvement after six or eight treatments. The uterus which was formerly fastened far back toward the sacrum is now movable and pretty well to the front, in fact almost normal in position—that is a fact which will outweigh any amount of theory. As I have said there is no question at all that Brandt claims too much for his method and applies it to cases for which it is entirely unfitted, but that is no reason why scientific men should not examine the method thoroughly and determine the good and bad in it, its limitations, the class of cases to which it is adapted, and utilize it. Because Priessnitz, who practiced hydropathy, claimed too much, is no reason why a certain amount of cold water properly applied is not of service, and we all use it more or less. The same statement, to my mind, applies to Brandt's method. It should be carefully studied, its limitations ascertained, and it may prove to be a valuable resource in some intractable cases.

Dr. SKENE:—The position of the matter as set forth in the paper and discussion seems to be this: that Brandt is not a member of the profession, although I had the impression that he was. My impression was obtained from the fact that he appeared in the literature of the subject, and I knew that no one not a physician was permitted to practice medicine in his country, but I presume he claims massage is not medicine and hence he can practice under the law. It has been argued that not being a physician is against him to the extent that we should accept his views with some caution, but it is no good reason why we should not accept his method and utilize it for the benefit of our patients if it is good for anything. That is one thing that seems to have been pretty definitely settled. You have also settled the fact that he claims altogether too much. That is a mistake made by men like Brandt out of the profession, and it is the mistake almost invariably made by men in the profession who discover a good thing, whether it be in medicine, surgery, or gymnastics. There are few who can avoid the temptation to try their favorite prescription or operation for the relief of everything. The result is that faulty methods are often established which only time and some extended experience by others can eliminate. That much argues in favor of Brandts' method, because it is perfectly natural that he, getting as he claims, good results in certain directions, should try to make it cure everything. He may have carried that failing, if you please to call it so —it is so—to an extent that a medical man would not, but it is only a question of degree—we all do it, I fancy. I am unable to recollect anything ever introduced in medicine that proved to be a good thing that was not misused to a certain extent by the discoverer or inventor, and by those who followed him.

Dr. RAYMOND:—Except Koch's lymph?

Dr. SKENE:—I accept the amendment. The remark I was about to make is, that there seems to be something good in Brandt's method. I have very little doubt in my mind that there is, but I should certainly circumscribe its uses. I simply consider it as suitable in cases of old pelvic adhesions or exudates, conditions that in some ways resemble the ruins after a fire or explosion, and it seems to me one of the ways of clearing away the rubbish and establishing order. Of course he is all wrong when he says that electricity is useless. It comes in, and I would class it as a means to be employed in cases where I should employ electricity, knowing that it will stimulate the absorption of old exudates and liberate fixation. I believe it should be classed in that line of treatment.

I was very glad to hear Dr. Butler bring out the points in its favor, because it certainly should be limited to the medical profession, and I do not believe that the method will ever have justice done to it and that it will be properly and advantageously employed until we have experts in the profession that can do it, as they do other things, better than the rest of us. If we had reliable, skilled men to whom we could send our patients, after we had made, or thought we had made a diagnosis, and could rely upon their control of the patients and a skilful manipulation, that would do away with the objectionable features entirely. There are really very few objections, because all the manipulation is done practically outside, as Dr. Butler has said, and I think it might be turned to a very great advantage. I also ought to contrast it with the method which came to us through the legitimate channels, advised and practiced by Schultz, of Germany, who first dared to break up these old adhesions that bound the uterus in abnormal locations, forcibly lacerating or tearing up the adhesions. That came to us through the right channel, the author's reputation and endorsement being well known and undoubted, and yet I should think that Brandt's method was infinitely the most rational, safest and surest, and hence the best. Schultz's method is certainly dangerous and does not prevent them from soon reforming.

In reference to the method being non-physiological, as claimed, I must say the way in which all adhesions are eventually loosened, if they ever are by physiological processes, is by motion. I am confident of that for this reason; when the pelvic organs are absolutely fixed it may take years to establish the slightest mobility, but once that is begun, so they will move by respiration and muscular exercise, then the adhesions from these exudates or inflammatory products, disappear very rapidly. That is an observation that was made and laid before the profession by Matthews Duncan many years ago.

I think in massage, as in hydropathy and the like, there is something of very decided value that we can in time turn to good account.

Now all this that I have said is based upon that which I have heard to-night since I came here, and if it is not good science, you are all responsible, and if we are all wrong, Dr. Maddren will set us right in closing the discussion. One word more before he closes the discussion. My own experience is so limited that I hardly dare to state it, but I may say this : I learned from the younger Emmet, Duncan—I understand that in cases of retroversion with adhesions from an old peritonitis or cellulitis, or anything else inflammatory, his method is to fix the uterus after using the speculum in Sims' position, and draws it downward and forward so as to put the uterine ligaments, which are stiffened and retracted by the inflammatory exudate on the stretch, and then gently manipulates them, as you would a swollen joint. To that extent I have had experience, and in those cases where the posterior vaginal wall was so retracted and short that a pessary could not follow up the uterus, I have adopted the stretching and manipulation method, so as to redevelop this posterior vaginal wall, and at the same time stretch the ligaments and soften them and the adhesions at the same time. I have practiced this method, which I would call Emmet's instead of Brandt's, and I know it is beneficial.

Dr. MADDREN:—As I said, I came as a learner and not as a teacher, and I hoped that the discussion would bring out the good and bad points that I had omitted. Perhaps in giving that long list of ailments, I conveyed an impression that would be unjust to Brandt. He does not claim to cure all cases of those diseases, only a portion of them, and before looking up the subject, I was under the impression that it was limited to those cases of old adhesions or exudations. I think also that the gentlemen have an impression that he treats acute inflammations, which he does to some extent, but regards them as exudations rather than acute inflammations, if a distinction of that kind can be made. The article from which I derived most of my information, was contained in a copy of "Wood's Library," published in October, in which the whole of his system is set forth, and, if the gentlemen will refer to that work, they will get it at length and see at once what I have failed to bring out. I am obliged to you, Mr. Chairman and Gentlemen, for the discussion, and I know I have derived benefit from it.

NARRATION OF CASES.

Dr. L. G. BALDWIN:—I had a rather interesting case in which Dr. Jewett did craniotomy for me on Monday last. It was interesting from the fact that it seemed as if the child ought to have been delivered. There seemed to be plenty of room, the child did not seem to be extra large, in fact everything seemed as if the labor should have been completed. The patient was a primipara, æt. nineteen years. I was called to see her on Sunday noon, at which time there was only a slight dilatation and the cervix was high up above the symphysis. My first idea was that it was probably a transverse presentation; but in putting her on her side so that I could push back the perinæum, I could just feel the head above the pubes. I could determine the presentation by examination of the abdomen. At 5 o'clock in the evening there had still been no descent of the head and but little dilatation. I saw her again at 12 o'clock midnight, when the dilatation was complete, but there was still no descent of the head; the pains were not severe, although fairly good. At about 3 o'clock in the morning the membranes ruptured, and then instead of the pains increasing they grew rather weaker and less frequent. I hesitated to call any one at that time of night, but finally, at 5 o'clock, I sent for Dr. D. W. Waugh and we applied the Tarnier forceps, but were totally unable to make any advance. I afterwards did version, which was extremely difficult, not only in getting the feet down, but in delivering the body. We finally succeeded in this, but it was absolutely impossible with any amount of force that two of us could use by expressio fœtus and by traction on the limbs to deliver the head, so I decided that nothing but craniotomy could make delivery possible. I sent for Dr. Jewett, who, after taking careful measurements of the pelvis, did the operation and delivered the child. In talking about it afterwards, he seemed to think that it was a case which if told to any one well versed in obstetrics, the opinion would be that the child should have been delivered. There was only, I think, about half-an-inch shortening in the antero-posterior diameter; the child was large. weighing about eleven or twelve pounds; the head was large, the anterior fontanelle was almost entirely obliterated, ossification having progressed to an unusual extent. It seemed to be a complication of circumstances which rendered delivery impossible.

Dr. Hyde:—When you first applied traction with the forceps, did you have the patient in the dorsal decubitus?

Dr. Baldwin:—Yes, sir.

Dr. Hyde:—Did you at any time have her in the English position?

Dr. Baldwin:—No, sir.

Dr. Hyde:—I speak of this, Mr. Chairman, because about a month ago I was called in consultation where a physician had been with the patient nearly all day, and in the afternoon had called in a brother physician to assist him, and they had been using instruments for two hours continually, trying to make the fœtal head engage in the superior strait, and they seemed to have failed entirely, although they had succeeded in bruising the soft parts to a great extent. Ecchymosis existed to a very considerable degree all around the perinæum and buttocks—to a degree larger than I think I ever saw in any case, and I thought the internal damage had been almost irreparable; there was also a great deal of tumefaction of the soft parts. There was no contraction of the pelvis, and I could see no reason why the child should not be delivered. The position was the First; I had them give her chloroform to complete narcosis, and applied the instruments, and then placed her in the English position, and I found that within ten minutes I was able to deliver the child without using any considerable amount of force. I think that this is rather a secret, but it is certainly well worth knowing amongst obstetricians—how much more they can do with the patient in the English position in certain high forceps cases than they can do with the patient in the dorsal decubitus. Yet, I do not wish to give the impression here that I am an advocate of the English position in all cases of forceps delivery—far from it. Its advantages are only with high forceps cases.

Dr. RAYMOND referred to a recent case of Cæsarean section performed at the Long Island College Hospital, and remarked that the question of performing craniotomy in preference to Cæsarean section in the case mentioned came up, and the decision arrived at was adverse to craniotomy.

The subject of craniotomy thus introduced was discussed, as follows:

Dr. SKENE:—I would like to ask if craniotomy is not very fast becoming not exactly obsolete, but is it not employed less frequently now than formerly? I have always been interested in that subject, because long ago I held that craniotomy should never be performed on a living child, and while in the practice of obstetrics I never had occasion to be called upon to do that, and yet I had occasion to do craniotomy. I have always been surprised at the mortality to the mother after craniotomy. I was so disappointed by the mortality to the mother that I made up my mind that in a case where the decision or election had to be made between craniotomy, Cæsarean section, or laparo-elytrotomy, or whatever operation was selected, that in case the child was living the high operation should be adopted. In cases where there was no doubt as to the child being dead, craniotomy should be preferred. The great mortality, however, made me think about it, and I adopted a method of doing craniotomy as I would do a gynæcological operation. The method was published some sixteen years ago in the *American Journal of Obstetrics*. I might mention a case as an illustration of how easy the operation is and of how thoroughly one can protect the mother from damage. I had an urgent call to meet two gentlemen to consult in an important case. Not knowing the nature of the case, I simply took a satchel with me containing nothing but gynæcological instruments. When I got there I found it was a case of labor where they had tried the forceps faithfully and skilfully and could not possibly deliver the child, and they were both satisfied before they sent for me that the child was dead, and I satisfied myself also that it was. Then the question of craniotomy came up, and I placed the patient on the table, and with a large Sims' speculum retracted the pelvic floor and perforated the head, or rather with the tenaculum picked up the scalp and took out a section of it and then wormed through the sutures with the scissors and got in a curette and emptied the cranium. I then put on the forceps but was unable to deliver. I then passed a sound in between the scalp and the head, and while the anterior vaginal wall was kept out of the way by a depressor, I took a strong compression forceps and detached bone after bone carefully, making the scalp protect the mother, and finally when I had got most of the bones I simply made traction upon the scalp and the remains of the head came down. I found then a very curious thing which was new to me. This woman had borne many children, and we were at a loss to know why this one refused to come away, but after delivery was effected I made a careful examination to see how much or how little damage I had done, and I found what seemed to be an exostosis from the second section of the sacrum from above, which narrowed the pelvic outlet to a considerable extent. The fact that the baby was lost destroyed the confidence of the family in the attending and consulting physician and neither of them have ever been able to get a history of the case since, so we do not know whether that exostosis remains, or what became of it.

I would like to know whether any of the gentlemen have had experience in doing craniotomy in that way. I know that it simplifies and renders the operation infinitely safer than the ordinary method, it requires no special skill; any one accustomed to using Sims' speculum being able to perform it without crushing instruments. I would like also to know if I am right in my views with reference to the decision that craniotomy should not be performed on a living child. I am not talking now from the ethical standpoint, but from the scientific—whether it is not bad science, whether we do not give the mother a better chance, by the improved method of craniotomy, than by Cæsarean section.

Dr. Hyde:—I am delighted to hear Dr. Skene make this statement; it is well worth knowing; it is novel to me. I never had very much experience in craniotomy, as I did not take much stock in it. I certainly would not perform craniotomy on a living child unless the wishes of the parents and friends compelled me to do it, and even then I would do it under protest.

Dr. Maddren:—Dr. Skene spoke about the great mortality to mothers in craniotomy. It is just as great, is it not, on the dead child as on the living child.

Dr. Skene:—I think there is no great difference.

Dr. Hyde:—Then I would like to ask why it is not just as proper, or more so, to perform Cæsarean section for a dead child as for a living one, because I think our present statistics make craniotomy more fatal to the mother than Cæsarean section.

Dr. Skene:—That gives me a chance to bring out a point which I would like to make, and I would say yes in answer to Dr. Hyde's question, if you adopt the old method; but if you adopt my method you would lessen the mortality. There is no reason why craniotomy cannot be done in an aseptic way without damage to the mother, and if you adopt the plan of operation referred to the danger would, I am sure, be less than Cæsarean section. I do not think any medical man has a right to say "I am sure" of anything unless he has experience to prove it; but I know that in all of the cases where I have performed craniotomy in that way, recovery has been as perfect as after natural delivery. I recollect a case where in the mother's second confinement her physician expected by inducing labor to deliver a living child—her first child was lost—but found when he made his examination that he could not obtain the slightest evidence of life in the child, and he therefore induced premature labor. I saw the case with him and the liquor amnii was exceedingly muddy and the child's head seemed to be soft, and yet it could not be delivered by gentle means or by forceps. I performed craniotomy on that case, and certainly if there had been any laceration or injury she would have had a good chance for sepsis, but she made a perfect recovery. It was evident from the softening of the skin, the condition of the nails, and the color of the liquor amnii that that child had been dead a week or so. It seems to me that that method of doing craniotomy has never been introduced. I am led to this conclusion from the fact that I never hear it alluded to, and as of late years I have seen but little obstetric practice, I have consequently not had much occasion to discuss it. I remember the instance of the first time that the subject was brought to the attention of the profession. It was the time the New York Obstetrical Society met at members' houses, and they used to come to Brooklyn. Dr. Sizer was then a member of the New York Obstetrical Society and lived very nearly where he does now. The meeting was held at his house, and it came very near being like that characteristic service where the sexton and the clergyman constituted the congregation. I believe we did not have more than two or three Brooklynites and one New York man, who was the president. There was not much to be done in the meeting and I related that method of craniotomy which I had practiced, which was so well received that I wrote it up and published it. A few days afterwards I met Dr. Thomas, who expressed regret that he had not been at the meeting, and asked me what was done. I related my method of performing craniotomy, and he said: "Why, I can see why that is an improvement—how is it we have never thought of that before? I know we can do craniotomy in that way better than in any other, everything is by sense of touch and sight, and any one who is accustomed to gynæcological operations could do it. I am quite delighted with that suggestion and I shall put it in practice. That is the best thing you have done for us yet in the profession." As I had not done anything then, I do not know as that is particularly high praise. That is the introduction of the matter to the profession as I remember it. The account of it covers a page and a half of the *Obstetric Journal.* I had forgotten all about it until the subject came up this evening.

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THE HEALTH OF THE SURVIVORS OF THE WAR,

A recent article in "The Forum" on the health of the survivors of the war, by Dr. John S. Billings, contains some facts of interest.

"The total number of soldiers enlisted in the United States Army was about 2,100,000. During and since the war one million have died. The death-rate during the war was about eighty-eight per thousand. Fifty-five in a thousand died of disease, thirty-three of injury. Since the war the annual death-rate has been about fourteen per thousand, which is a little above the average for adult males. Deaths occurred pretty rapidly for a few years after the war, but after that the per cent. fell. At present, the investigations as to the health of the survivors of the war show that the sick-rate is about four times greater than it is among the ordinary population. This is not surprising, unless the comparison be made between the health of the veterans and that of the adult male population over fifty years of age, for the great majority of war veterans must have passed that age."

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EDITORIAL.

BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

We extend the right hand of fellowship to this new Society, which had its birth March 11, and take pleasure in announcing to our readers that its papers and proceedings will be published in the JOURNAL. As its membership includes those who are recognized as experts in the departments which it represents, we can safely predict that our pages will be greatly enriched by its contributions.

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JONES VS. BROOKLYN DAILY EAGLE.

The suit with the above title was by far the longest and most important ever tried in this city, in which medical testimony predominated, and in which the result turned entirely upon the evidence of medical expert witnesses. The verdict, which was a complete victory for the defendant, was hailed with great satisfaction by the whole medical profession of the city, who regarded its honor and reputation as in a measure at stake in the trial, for if such practices as were testified to were permitted to continue in such a community as that of Brooklyn, then there was no virtue in uprightness and conscientiousness. We hope soon to be able to present our readers with a *résumé* of the evidence.

PHYSICIANS' MUTUAL AID ASSOCIATION.

The list of members of the New York Physicians' Mutual Aid Association, according to the Twenty-third Annual Report just published, now exceeds one thousand and is steadily increasing. It is expected that in the course of a few months the sum of $1,000 will be paid on each death. This is a safe and cheap life insurance, costing but about $10 per year.

We cordially endorse the Association and its objects and would urge again, as we have so often urged before, every member of the profession to become a member of the Association, especially those who have families depending on them for support. The $10 annual payment will never be missed, and the $1,000 which the family will receive will often be of inestimable value just at a time when it is most needed.

HUMAN NOSE NOT IN THE CENTRE OF THE FACE.

A California physician makes the above statement, and explains thereby the difficulty many people have in keeping eye-glasses on the nose. The difference between the two sides from centre of nose to centre of pupil is, as a rule, from $^1/_{16}$ to $^1/_8$ of an inch, seldom more than the latter. The decentering, which results in lenses mounted in the ordinary way, is enough to interfere materially with perfect vision. It is the exception to find the nose centrally situated.

PATERNAL IMPRESSION.

A good deal has been written recently in medical journals on the subject of Maternal Impression, but as the literature on Paternal Impression is exceedingly meagre, we deem it a duty to call attention to the following remarkable case which we find recorded in a daily paper:

"A queer freak of nature has just been discovered at Centreville, N. J. It is a two-month-old child with a perfectly formed body, but with a pig's face. The snout is very pronounced. C—— M—— is its father. A relative of M—— is said to be not only the mother of this baby, but of two other children. Deputy Sheriff Walling intends to have a warrant issued for M——'s arrest. M—— is an ex-convict, having by a curious coincidence served a term for poisoning a neighbor's pigs."

So far as we know no explanation has been given of this remarkable "freak," but we presume now that the fact has been made public, satisfactory explanations will follow.

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GOLD-HEADED CANE.

Among the lares treasured in the penetralia of England's Royal College of Physicians, there is none around which more hallowed or interesting memories are clustered than the gold-headed cane, which was owned and daily carried on their professional rounds, successively by five of the most eminent and popular of London's physicians, during a period of nearly a century and-a-half; from 1689, when Radcliffe first carried it into the Kensington House, on the occasion of one of William the Third's attacks of asthma, to 1823, when Matthew Baillie laid down the staff, which until his time continued to be the necessary complement of the physician. During this long period of professional career this staff was present at the bedside of all sorts of patients, from king to peasant; and in consultation and companionship with the most eminent physicians and other great men of Europe, from the time of Sydenham to the memory of some now living.

Some of the interesting scenes which "The Gold-Headed Cane" has witnessed, with sketches and anecdotes of its owners and their contemporaries, have been described by Dr. Macmichael, the then Registrar of the College, the subject and title of one of the most entertaining little books to be found in medical literature.

Our biographical sketches in this number of the JOURNAL are of the two first owners of the cane, and during the next two months we shall continue the series.

RICHARD MEAD, M.D., F.R.S.

Radcliffe, just before his death, presented his gold-headed cane to the young man who was destined to be his successor as the greatest London physician of his time, with these words : "Accept this cane. It has accompanied me now for many years in my visits to the sick, and been present at many a consultation. Receive it as a token of my friendship, and prosper. Te nunc habet iste secundum."

No two physicians were ever, in character, more opposed to each other, except in one point—that of professional penetration. Radcliffe was blunt, coarse and violent ; Mead polite, polished and refined. Radcliffe disregarded letters ; Mead cultivated them. The elegance of Mead's manners, and his modesty, won, however, upon the rude nature of Radcliffe, and he determined to promote the interests of so highly and accomplished a scholar

It is said that this admiration began with Radcliffe calling upon Mead one morning and finding him reading Hippocrates, taking up the book, said : "What ! my young friend, do you read Hippocrates in the original language ? Well, take my word for it, when I am dead and gone you will occupy the throne of physic in this great town."

Mead is said to have replied : "No, sir ; when you are gone, your empire, like Alexander's, will be divided amongst many successors." At any rate, Radcliffe was no sooner dead than Mead moved into his old residence and succeeded him in a large share of his business.

Mead was born at Stepney, near London, in 1673. Studied medicine at Leyden under Herman and Pitcairn, and while there became the intimate friend of Boerhaave, which friendship continued till broken by death. He afterwards visited Italy and took his medical degree at Padua. He returned to England in 1696, and commenced practice in the house where he was born. In 1702 he published his mechanical account of poisons ; and two years afterwards became a Fellow of the Royal Society, his inaugural essay being "An Account of the Cutaneous Worms which Generate the Itch." In 1703, being chosen a physician to St. Thomas's Hospital, he removed to London, and was appointed by the Company of Surgeons to deliver anatomical lectures in their hall, which he did for several years with much credit, thus becoming one link in that chain of physicians who down to the time of Baillie, were almost the only teachers of anatomy in England.

Space will not allow us to more than hint at the many valuable contributions he gave to the medical art and literature.

In 1719 he demonstrated to the Lords of the Regency that the plague was a contagious disease and succeeded in having a quarantine established and stopping its progress.

He experimented on some condemned criminals, with the inoculation of small-pox, and afterwards successfully inoculated the two young princesses, Amelia and Caroline demonstrating that the dreadful disease might in that way be mitigated.

On George II's accession to the throne he became his physician in ordinary, having previously been in attendance at the death of Queen Anne.

He achieved a European popularity ; and in the capital of his own country had a social position that has been supplied by no member of his profession. He was in full practice for nearly half a century. He is said to have at one time had an annual income of from £5,000 to £6,000, yet he was exceedingly liberal, never sparing in his advice and assistance to the poor, and often aiding them with money. It has been said of him, that "of all the physicians who have ever flourished, he gained the most, spent the most, and enjoyed the highest favor during his life time, not only in his own, but in foreign countries."

He maintained a correspondence with the chief literati of foreign countries, and he became universally renowned for his tests, learning and science. He commanded respect beyond his contemporaries, and was distinguished in the republic of letters no less than in his own profession.

"Fortunate beyond fortunate men, Mead had the misfortune of living too long. His sight failed and his powers underwent that gradual decay which is saddest of all conclusions to a vigorous and dignified existence."

He passed away January 16, 1754, at the ripe age of eighty-f

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Regular monthly meeting of the Medical Society of the County of Kings, held at the Society's rooms, No. 356 Bridge Street, Brooklyn, Tuesday evening, March 15, 1892.

The meeting was called to order at 8.15 P.M., with the President, Dr. Emery, in the chair.

There were about sixty members present.

The Secretary read the minutes of the last regular meeting, which upon motion duly seconded, were adopted as read.

REPORT OF COUNCIL.

The Council reported that they had examined the credentials of Drs. George L. Mallett and John M. Clayland, and reported favorably upon such applications.

APPLICATIONS FOR MEMBERSHIP.

The following applications for membership were received:

Dr. William James Pennington, of 153 South Fourth Street, Albany Medical College, 1891; proposed by Dr. Lawrence Coffin and endorsed by Dr. Z. T. Emery.

Dr. S. E. Jelliffe, of 196 Sixth Avenue, College Physicians and Surgeons, New York, 1889; proposed by Dr. Benjamin Edson and endorsed by Dr. George W. Brush.

Dr. H. W. Haskell, of 65 Monroe Street, New York Univ. Medical College, 1891; proposed by Dr. Onslow Allen Gordon and endorsed by Dr. Walter B. Chase.

For corresponding membership, Dr. John Mann, of Jericho, Queens County, L. I., New York Univ. Medical College, 1884; proposed by Dr. Walter B. Chase and endorsed by Dr. G. R. Butler.

For corresponding membership, Dr. George Kissam Meynen, of No. 14 Clinton Avenue, Jamaica, L. I., New York Univ. Medical College, 1885; proposed by Dr. Walter B. Chase and endorsed by Dr. G. R. Butler.

ELECTION OF MEMBERS.

The following have been regularly proposed and favorably reported upon by the Council, were declared elected members of this Society: Drs. Joseph DeCastro, Walter C. Wood, George A. Williams and Eugene P. Mallett.

Dr. J. L. Kortright read the first paper of the evening, to wit: "Dystocia from Impaction of the Shoulders," which was discussed by Dr. Jewett.

Dr. Reuben Jeffery read the second paper of the evening, to wit: "A Plea for a More Conservative Treatment of Nasal Affections," which was discussed by Drs. Rice and Douglass, of New York, and also by Drs. French, Cox, Woolley, Jeffery and Briggs.

The third paper of the evening, to wit: "The Influence of Habitual Position on the Symmetry and Health of the Body," was read by Dr. Eliza M. Mosher, and discussed by Drs. French, Dudley, Anderson, Coffin and Mosher.

UNFINISHED BUSINESS.

The Chair announced the appointment of the following committee under the resolution of Dr. Raymond, to arrange for a Pan-American Conference, to wit: Drs. Raymond, Skene and Hutchins.

There being no further business, on motion, the Society then adjourned.

PROGRAMME OF MAY MEETING.

Appendicitis.—"Ætiology and Pathology," J. M. Van Cott, Jr., M.D.; "Symptoms and Diagnosis," W. J. Cruikshank, M.D.; "Treatment," G. R. Butler, M.D.; "Indications for Operation," J. B. Bogart, M.D.; "Operative Technique," H. B. Delatour, M.D.; "Report of Three Cases Treated Successfully Without Operation," G. G. Hopkins, M.D. Members desiring to discuss the papers will kindly send their names to the President, Dr. Z. T. Emery, 440 Washington Avenue.

W. M. Hutchinson, *Secretary.*

KINGS COUNTY MEDICAL ASSOCIATION.

The May meeting will be occupied by a paper by Dr. W. H. Bennett, on "Dust and a Polluted Atmosphere as Prime Factors in the Causation of Chronic Naso-Pharyngeal Catarrh; with some remarks on Deviations of the Nasal Septum and Treatment."

All regular practitioners of medicine and medical students are invited to attend the meetings and participate in the discussions, and to remain as guests of the Association after the meeting.

BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

On March 11, the Brooklyn Dermatological and Genito-Urinary Society was organized with nine members. Dr. Samuel Sherwell, Professor of Dermatology in the Long Island College Hospital, was elected President; Dr. A. E. Smylie, Vice-President; and Dr. Geo. D. Holsten, Secretary-Treasurer. The Society will hold its meetings, which are private, on the first Friday of each month. The meetings will be mainly devoted to the presentation of clinical cases and their discussion.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

PENTAL IN SURGICAL PRACTICE.

V. v. Rogner (Wiener med. Presse, 1891, No. 51). R. used pental very successfully in cases where narcosis is required for a short time only. The same conditions for its use obtain as for anæsthesia from chloroform.

R. used Esmarch's inhaler, covered on its inner side by a layer of wadding.

Narcosis in sixty or seventy seconds, in all cases, followed its administration; without any stage of excitement and without any injurious effect upon the heart or respiration.

At the expiration of three minutes the patient awakes quickly and quietly, but anæsthesia lasts for several minutes more.

TREATMENT OF SENILE GANGRENE OF THE LOWER EXTREMITY, PARTICULARLY IN DIABETIC PERSONS.

L. Heidenhain (Deutsche med. Wochenschrift, 1891, Nos. 38 and 39). From the material at the Augusta Hospital in Berlin, H. has studied the course and therapy of senile gangrene. His observations present nothing new; his conclusions, however, are as follows:

1. That slight wound infections in diabetic persons assume a severe form, frequently ending in gangrene, occasioned by disturbed nutrition and perhaps the increased amount of sugar.

2. That diabetes, even in early life, appears to be complicated with arterio-sclerosis.

3. The so-called diabetic gangrene of the lower extremities is due, in the majority of cases perhaps, to arterio-sclerosis. Senile gangrene in diabetic persons is the more dangerous, as the inflammatory process is more severe and protracted.

4. Senile gangrene is caused primarily by either inflammatory disturbances of the circulation or by thrombosis of the larger arteries of the extremities. (H. does not mention the very interesting communications made by Zoegre-Monteuffel during the last surgical congress.)

5. As long as the gangrene is restricted to one or two toes, use local antiseptic treatment, elevate the leg and the gangrenous portions may be allowed to slough off spontaneously. If the gangrene attack the plantar or dorsal surface high amputation above the femoral condyles is indicated, making the flaps as small as possible. High amputation is indicated also if fever be absent, by the extension of the gangrene.

RENAL RETENTION.

F. Guyon (Ann. des. Mal. des. Org. Génito-Urin., 1891, Vol. ix., No. 9). Renal retention is a complete or incomplete, temporary or permanent distention of the renal cavities and of the renal substance itself by a fluid of varying quality. In some instances it is more or less urinous in character, but in most cases it is pus.

In twenty-four nephrectomies the author found in but one a perfectly clear aseptic fluid; in two cases a mixture of urine and pus was present, and in the remaining twenty-one cases pus was found in abundance. In four cases of intermittent renal retention G. observed clear aseptic fluid in all. In cases of renal retention the function of the kidney is greatly impaired; the secretion is at first slight, then further decreased, and finally completely lost. By absorption of the secreted fluid the renal secretion being absolutely aseptic, the existing tumor gradually becomes smaller and complete contraction of the kidney occurs. This latter fact is very important in cases of accidental injury to the ureter during a difficult laparotomy; for by ligature of the ureter complete aseptic renal retention may be caused.

In distention of the bladder as well as in renal retention, the surgeon should distinguish complete from incomplete retention. The former almost without exception develops gradually and eventually results in a large tumor resembling those found in pyonephrosis, which obtains in incomplete and permanent septic renal retention.

The differences as to ætiology, pathology, anatomy and course of hydronephrosis and pyonephrosis are so great that G. considers it unnecessary to discuss both affections in the same article, as was formerly done by Simon and recently by Küster. There are, however, cases transitory in character, where the urine of infected persons contains pus-corpuscles, the retention though being acute and temporary as in cases of hydronephrosis—these cases may be called uropyonephrosis. The genuine aseptic hydronephrosis may, from external infection become pyonephrosis, but only in case the respective ureter is not completely impassable.

Infection through the circulation is of rare occurrence.

The objective symptoms of renal retention are, in a general way, the same as in every other renal tumor. A remarkable feature is the frequent absence of fluctuation and even tension, but relatively these symptoms are most frequently observed in cases of hydronephrosis. The changes in weight of the tumor are characteristic. Fever is rarely present in cases of aseptic renal retention, but in pyonephrosis is a constant factor. Pain is present in all cases, but usually more frequent in aseptic retention, the pain depending upon the distention and not upon the quantity of fluid. In cases of intermittent retention, rapidly occurring and disappearing, pain is a prominent symptom. The quantity of urine is decreased in aseptic as well as in septic retention.

SILKWORM-GUT IN SURGERY.

Bianchi (Reforma med., 1891, May 1). Silkworm-gut, *crin de Florence* of the French, is not the bowel of the silkworm, so B. says, but the worm's silk producing gland with its contents. In order to render the material aseptic, B. places it in a 5-100 solution of carbolic acid, then boils it for one hour in a 3-100 solution of boric acid, and preserves it in a 1-1000 solution of sublimate. He has used the gut very extensively and claims it to be preferable to silk and catgut, as it does not absorb the secretions, and is suitable for plastic operations as well as for suturing of nerves and bones. A thread eighteen to twenty cms. long can sustain twenty to twenty-three kilograms. B. used the silkworm-gut in the following operations among others: In two resections of the knee, two osteo-plastic operations by Pirogoff's method, one Ogston's astragalo-navicular resection, one fracture of the patella, per valgus, and in compound fracture of the bones of the forearm and the humerus, etc.

EXTIRPATION OF THE RECTUM BY THE SACRAL METHOD.

Richelot (Bull. Mém. de la Soc. de Chir. de Paris, Vol. xvii., p. 125). Kraske's operation (sacral method) for extirpation of the rectum is highly recommended by the author, not only in the case of high, extensive and almost inoperable carcinoma, but also where the new formation is lower down and more accessible.

Kraske's operation permits of

1. Excision of high carcinoma, the anal sphincters being retained.
2. Total removal of well circumscribed carcinoma, which cannot be accomplished with certainty by other methods.

3. Preservation of the whole, or at least a portion of the external sphincter, the rectal wall being attacked below.

4. Prevention of the formation of a cloaca, in case the carcinoma is situated in the recto-vaginal wall.

5. The attack on limited recurrence may be checked, thus giving the patient a further chance of recovery.

6. Accomplishing more easily and precisely the extirpation of syphilitic stricture.

These conclusions are based on five cases under his own observation. In order to better prevent extension of the disease, R. incises the posterior rectal wall in the median line, then having removed the diseased portion, he sutures up this as well as the ends of the rectum. In the rectum he places a large drainage-tube wrapped in iodoform-gauze—two smaller tubes at each side of the sutured rectum lead outward to the surface.

RUPTURE OF THE STOMACH.

Algot Key-Aberg (Nord. med. Archiv., Vol. xxii., 1890, No. 10, Swedish). The author relates the following interesting case. An old man of fifty-two attempted suicide by swallowing a large quantity of opium. Three hours later he was brought to a hospital and his stomach irrigated. The attending surgeon noticed that the quantity of water flowing out was by far less than that poured in. The patient died three hours after being taken to the hospital. The autopsy revealed lesions of the stomach, the mucous membrane being torn in ten places. Author suggested that the lesions resulted from the dilatation of the stomach during irrigation. Numerous and careful experiments confirmed Aberg's suggestion. His conclusions based on these experiments, are as follows:

1. The so-called spontaneous rupture of the stomach produced by internal pressure, always show the characteristics of a torn wound (contra Lefevre's statements).

2. They arise and are developed as complete ruptures, at or near the small curvature, the direction being almost parallel with that of the curvature.

3. They are developed from within through the wall of the stomach.

4. A total rupture is usually accompanied by a number of rents of the mucous membrane, and often of the serous membrane as well.

In criticising the published cases of spontaneous rupture, the author affirms that the majority of these cases were simply cases of round ulcers of the stomach, and that in a few older cases the rupture occurred post-mortem. He concedes only five or six cases of genuine spontaneous rupture of the stomach to have been observed (cases of Revilliad, Hafmann, Chiari, Rokitansky and Lautschner).

OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children, and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief to the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

HISTOLOGICAL STUDY OF PUERPERAL ENDOMETRITIS.

Bumm (Arch. f. Gyn., B. 40, H. 3,). In fatal cases of puerperal septicæmia, in which opportunity is offered to trace the source of infection, it is found with remarkable uniformity in the endometrium. In twelve cases examined after death by Vidal, the origin of the septic invasion was shown to be the uterine cavity. B. has made similar observations in five cases post-mortem. The literature of the subject is thus far, however, very meagre. The important point in the local therapy of childbed fever is the treatment of the endometrium. The character of the treatment will be determined largely by our views of the manner in which the micro-organisms lodge and grow in the uterine cavity. The author, after Kehrer, makes two classes of cases, putrid and septic.

PUTRID ENDOMETRITIS.

Under this head belong those cases in which, either with or without retention of secundines, a decomposition of the decidua takes place owing to the invasion of putrefactive, not septic micro-organisms. The decomposition may attack only the superficial layer of the decidua, which in the normal course of childbed is thrown off germ-free and without putridity; or it may penetrate deeper into the mucous membrane. Putrid intoxication then results from resorption of the chemical products of putrefaction. The bacterial growth includes several species which thrive in foul uterine lochia. Clinical experience would lead us to believe that simple putrid endometritis is by no means uncommon. Exact bacteriological investigation, however, teaches the contrary. In the majority of cases of endometritis after abortion and term-births which appear to be putrid only, judging from the odor of the ochia, and the rapid subsidence of fever after clearing out the uterine cavity, septic micro-organisms, streptococci and pyogenic staphylococci are found as well as putrefactive germs. In other words the infection is a mixed infection. In eleven observations upon what appeared to be purely putrid endometritis, B. found pathogenic organisms in all but three, by culture tests.

SEPTIC ENDOMETRITIS.

Under this heading fall those cases of puerperal endometritis in which the well-known microbes of human sepsis have lodged, either upon or in the decidua. In mild cases one sees nothing notable in the membranous shreds brought away by the curette, or its superficial layer may have a slightly yellowish color. In severe cases the endometrium may show little alteration to the naked eye yet, under the microscope, may be found permeated with cocci. Frequently in severe infection colonies of cocci are present and the whole mucous membrane of the uterus is changed to a dirty-colored smeary mass, which may be easily scraped off with the knife from the underlying muscularis. In these last cases putrefactive germs are found. Great as the apparent difference may be, putrid, croupous and gangrenous endometritis are etiologically only varieties of septic endometritis.

The cocci most constantly found in septic puerperal endometritis are the streptococci. This has been demonstrated by Czerniewski in hospital cases, and I have found it to be true also in private practice. C. found streptococci alone in the lochia of thirty-five cases that recovered. In thirteen he found also other organisms. The author's observations correspond with those of C.

LOCALIZED SEPTIC ENDOMETRITIS.

The conditions found here resemble those observed in putrid endometritis. The superficial layer of the decidua is full of bacteria, but the micro-organisms do not penetrate the granulation layer. This layer forms an impassible barrier to the pathogenic as it does to the putrefactive germs. The fever in localized septic endometritis, then, must be attributed to the ptomaines of the streptococci and staphylococci.

SEPTIC ENDOMETRITIS, WITH SUBSEQUENT GENERAL INFECTION.

In this form the infection spreads from the uterine mucosa, and finally invades the whole body. Bumm has examined but five cases of this variety of infection. Three were infected through the lymphatics and two through the blood-vessels. Of the cases of lymphatic infection, one, of extraordinarily rapid course, died on the fourth day after birth, with symptoms of septic, streptococcus, peritonitis. Streptococci were found in the blood, liver, kidneys, spleen and endometrium. Microscopically the endometrium in this form presents a grayish-white coat of necrotic decidua. Here and there glimpses of the reaction zone are seen, but nowhere so well defined as in localized endometritis. The necrotic zone passes insensibly into the neighboring tissues. The pathogenic organisms have migrated in places from the endometrium through the lymph spaces to the outer surface of the uterus, giving rise to the fatal peritonitis. It cannot be denied that this method of extension corresponds to what we see in skin erysipelas. We find here again the decidua permeated with streptococci and in a condition of necrosis. As far as this reaches, the decidua is melted down to a sloughy mass, preparations of those parts of the endometrium on which croupous patches may be seen with the naked eye show these formations to be decidua which has become necrotic. They appear whitish and firm, like diphtheritic membrane, yet they are due merely to the macerating or caustic effect of streptococci. When putrefactive germs are also present, this diphtheroid layer is more pultaceous and of a brownish color. The reaction zone is everywhere apparent but only faintly marked.

B. next explains the form of infection in which the infectious material traverses the uterine veins, giving rise to the thrombotic or pyæmic forms of puerperal fever. Here we have to deal with what is primarily a localized putrid and septic endometritis. The decidual covering of the uterine cavity is impregnated with bacteria and is necrotic. Streptococci and putrid germs are found microscopically. The endometrium is dark-brownish and smeary. The reaction zone is well developed and the germs do not gain entrance. In that part of the thrombi which lies next the superficial layer of the decidua, besides chain cocci we find also putrid germs. Deeper in the uterine parenchyma only chain cocci are to be found in the infected thrombi. Only pathogenic species possessed of migratory powers appear in the thrombi; the putrefactive organisms remain behind; the migration of the cocci follows the axis of the thrombus. The disease germ is always the same, the streptococcus septicus.

How then can the various forms be explained when we have in all cases the same micro-organisms and the same wound surface, yet in one case a localized infection, in another general septicæmia, the channels of diffusion being now the lymph-canals and now the blood-vessels. It is explained only by difference in the virulence of the disease germs. It is well known that the smallest amount of septic material may cause the severest forms of sepsis from the smallest wounds, and the converse is equally true. In localized infection the germs are of slight virulence and the reacting power of the tissues is able to cope with them. The more virulent organisms traverse the walls of the uterus before the reaction can be established.

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GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

DRAINAGE WITH GAUZE-PACKING IN UTERINE DISEASE.

The "New York Journal of Gynæcology and Obstetrics" for February, 1892, contains a paper by Dr. Wm. M. Polk, treating of the cure of metritis and endometritis by the use of gauze-packing to the interior of the uterus. He advises its use when these conditions exist independent of, or are complicated with, salpingitis or other peri-uterine disorder.

Specialists have long recognized uterine drainage as a remedial measure, but fear of evil results following any invasion of the interior of the organ, has kept the profession at large from adopting what seems to be a most valuable procedure for combating these obstinate pelvic disturbances.

If the uterus can be taken out with small danger to the patient, there should be no danger at all in an intelligent invasion of its cavity. In speaking of the slight danger attending operations of the kind the author italicises as follows: "*It is only necessary in both operations that you should be scrupulously clean and provide for the escape of infecting material*—should any be present—by adequate drainage."

Gauze-packing has been found useful in other parts of the body where local depletion was desired, why not use it here?

The author reports forty cases in which the results of treatment have been most satisfactory. His paper calls attention to 1st, Chronic endometritis; 2d, Chronic metritis (sub-involution); 3d, Chronic metritis with salpingitis.

Endometritis induced by flexions is the most obstinate to treat, as the deformity must be corrected either before or soon after the packing to make the good results permanent.

Cases due to puerperal and gonorrhœal infection seem to be quite tractable.

Dr. Polk puts himself strongly in opposition to the generally accepted dictum that the uterus should not be invaded when peri-uterine inflammation is present.

It will not prevent in all cases the need of a cutting operation to remove diseased appendages, but with proper treatment applied to the endometrium, the necessity will less frequently occur. By this method a healthy tube may be saved when the diseased one is removed, as with cure of the trouble in the body of the uterus there will no longer be danger of extension of inflammation to the healthy part.

Even in cases of double salpingitis, where the patient will not submit to mutilation, her condition may often be much improved if the gauze-pack is used.

If it is properly done no fear need be felt of producing either acute peritonitis or salpingitis. Immediately after the packing there is a greater or less rise of temperature, which subsides in one or two days and remains normal. If any inflammation external to the uterus should result, physical signs would soon make it manifest. This accident has never occurred in the experience of the author. In several cases the packing was done in conjunction with perinæorrhaphy or trachelorrhaphy.

The operation is a very simple one. The patient should be etherized and the external parts, as well as the vagina and cervical canal should be thoroughly cleaned first with soap and water, and then with an antiseptic solution.

The canal should then be dilated sufficient to receive a cervical speculum, and through this the cavity of the uterus should be douched with a solution of bichloride 1-2000.

The speculum will insure a free exit for the fluid. Next, the sharp curette should be used over the entire cavity, after which the douching should be repeated.

A piece of cheese-cloth about as wide as the finger, and three feet long, consisting of three or four thicknesses, should be sterilized in a 1-500 solution of bichloride and then washed in hot water and squeezed dry. This can be carried into the uterus by the aid of a tampon-screw section by section, first filling one cornu and then the other until the internal os is reached. The end should be drawn out into the vagina and coiled around the cervix. Last of all, a larger piece of gauze, that has been sterilized like the first one, may be placed loosely in the vagina and the operation is done.

A saline cathartic should be given the second day and hot fomentations applied to the abdomen if any local disturbance arise. The patient should remain in bed for one week, and the sixth day the pack should be removed and the antiseptic douche repeated.

Usually a second packing is not required. If it should be, as may occur in endometritis fungosa, or in salpingitis, it can be done without an anæsthetic after the first one is removed.

The amount of physical annoyance to the patient is in most cases little more than the same patient experienced at her menstrual epoch.

The author adds to his paper a tabulated history of forty cases. In twenty-six only did the temperature reach 100°, and in only one case did it exceed 102°. The average time in the hospital was eighteen-and-one-half days.

[This method of treatment must be watched with interest and the results carefully noted, both as regards immediate and remote effects. Doubtless such recommendations will give a new impetus to the procedure. In forming judment the medical profession must be advised of failures as well as successes.—W. B. C.]

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PATHOLOGY.

BY JOSHUA M. VAN COTT, JR., M.D.,

Pathologist and Professor of Histology and Pathological Anatomy, Long Island College Hospital,
Director of the Department of Histology and Pathology, Hoagland Laboratory.

PNEUMATURIA IN GENERAL, AND IN DIABETES MELLITUS IN PARTICULAR.

Senator (Internat. Beitr. z. Wissensch. Medicin. Festschr. z. Virch. Jub. iii., 1891, S. A.). S. regards the origin of pneumaturia, *i. e.*, passage of gas with the urine, as follows:

1. Forcing of atmospheric air into the bladder.
2. Entrance of gases from the air-containing cavities of the body, *ex. g.*, the intestine.
3. Gas formation in the bladder through disintegration or fermentation of the urine, especially diabetes mellitus. S. had opportunity to investigate a case in which pneumaturia was observed before by Fr. Müller, who found the gas was composed of principally CO_2, H,N, and small admixtures of O and H_2S. Primarily there was butyric acid fermentation of the sugar. No pneumaturia was present when S. examined the case, but the freshly evacuated urine was always very cloudy, acid, contained leucocytes, and in the filtrate a trace of albumen.

Some specimens developed CO_2 without the addition of yeast, others not. In a second case of diabetes, cystitis and pneumaturia were simultaneously present. The urine was at no time bad smelling, occasionally after mixture with fermenting yeast odorous; acid reaction, very cloudy, contained leucocytes, yeast-cells and a few squamous epithelia.

After evacuation the fermentation of the urine occurs without addition of yeast; the gas is CO_2, the fluid contains alcohol. In this case there was alcoholic fermentation of the sugar. S. further remarks that disappearance of sugar in diabetes has been repeatedly observed in consequence of cystitis, through a fermentative process.

ANEURISM OF THE RENAL ARTERY.

Oestereich (Berlin klin. Wochenschr, 1891, No. 42.) O. publishes two cases of aneurisma arteriæ renalis:

1. Sacculated aneurism of a branch of the left art. ren. located inside of the kidney. Dilatation and tortuosity of numerous branches of both renal arteries (particularly the left) in a case of endarteritis chronica deformans. Breaking through of the aneurism into the renal pelvis; rupture; death from hæmorrhage.

Patient was a woman æt. fifty, who had commenced to bleed from the genitalia fourteen days before death.

2. Sacculated aneurism art. ren. dextr. attached to the trunk of the vessel outside of the kidney. Patient, a young man.

No symptom of aneurism during life.

According to O. the local semiology of renal aneurism is:

a. The tumor. Aneurisms of a certain size easily palpated, eventually pulsating, lying behind the colon as a tumor. This is the most certain diagnostic sign of renal aneurism.

b. Auscultatory findings, systolic or diastolic gasy bruit.

c. Hæmaturia appearing first when perforation occurs into the renal pelvis.

d. Pain inconstant.

In differential diagnosis are to be considered

1, Renal calculus; 2, Renal tumor; 3, Renal rupture; 4, Hæmophilia renalis.

Prognosis bad, because the uncomplicated outcome of renal aneurism must be inevitable hæmorrhage.

CHRONIC PERITONITIS IN CHILDREN.

Henoch (Deutsche med. Wochenschr, 1892, No. 1.) Aside from tuberculosis in childhood, there is also a form of simple chronic peritonitis, which has no relation with the former variety. This is a relatively seldom form and commoner amongst females than males. The ætiology is still entirely obscure; in some cases the stomach is apparently the starting point, in one of the author's cases, trauma in the hepatic area seems to have been the cause.

The lesion occurs usually in children who have passed the second or third year; and they do not generally complain of either pain or tenderness on pressure on the abdomen. Ascites usually marked. The general condition and nutrition remain in these simple cases fairly good, in marked contrast with the tubercular variety.

Purely medicinal treatment of chronic peritonitis (both varieties) H. has never seen beneficial. In the last few years cases of cure have been reported following laparotomy, most of the cases being diagnosticated as tubercular. While H. does not dispute the possibility of such a cure in true tuberculosis, he regards it as highly probable that some of the reported cases were simple chronic peritonitis. As proof of this, and the difficulty sometimes arising in the diagnosis of tuberculosis in these cases, H. reports a case, a girl of five years, in which he found at the laparotomy a great number of grayish nodules, varying in size from that of a cherry pit, to much larger and thickly set, as in tubercular peritonitis. Microscopical examination of one of these masses removed showed it to be composed of simple connective tissue and granulation tissue. There were neither tubercle bacilli nor giant cells; so that the case must be regarded as one of idiopathic peritonitis. The child made a complete recovery.

RELATIONS OF THE NITROGENOUS SUBSTANCES IN THE URINE IN CARCINOMA.

Töpfer, G. (Wien. klin. Wochenschr, No. 3.) T. investigated twenty pathological and two normal cases, to determine how the nitrogenous substance in the urine was parcelled out into urea, uric acid and ammonia. By subtracting the nitrogen in the three named bodies from the total amount of nitrogen, he got the "extractive nitrogen."

In the normal cases this amounted to 0.6–0.8 per cent. of the total nitrogenous material.

In the various diseases, tuberculosis, pneumonia, marasmus, diabetes, pernicious anæmia, syphilis, ulcus ventriculi, leukæmia, sarcoma, the percentage of extractive nitrogen oscillated between 0.08–5.1, while in nine cases of carcinoma (of lips, stomach, liver and stomach) the minimum percentage was 13.0 and the maximum 23.0. This great increase in extractive nitrogen was present, not only in advanced cases, but also very small epitheliomata, and it was not dependent upon nourishment.

OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,
Assistant Surgeon, Brooklyn, Eye and Ear Hospital.

DIRECT APPLICATION OF HOT WATER IN CORNEAL AFFECTIONS.

Lippincott (Ophthal. Review, March, 1892,) reports excellent results obtained from the repeated use of water at a temperature of 150° F. applied directly to the affected area in cases of obstinate corneal ulcer, and in one case of suppuration of a corneal wound. The ordinary remedies, both local and general, had been tried without much benefit. He advises heating the water in a test-tube also containing the dropper to be used, and in making the application to allow six to eight drops to fall singly and at one or two seconds interval upon the affected cornea.

ANATOMY OF PINGUECULA.

Fuchs (Graefe's Archiv., xxxvii. 3, p. 143,) after carefully examining the tissue changes in a large number of cases of pinguecula, concludes that it is the first stage in the development of pterygium. It belongs to the group of the inconstant senile changes in the eye, and depends undoubtedly to a certain extent upon exposure of the conjunctiva, occurring as it does almost invariably in that portion of the conjunctiva which is not covered by the lids when the eye is open. Senility may be regarded as the predisposing exposure as the exciting cause. The microscopical changes are well marked. There is a deposit of an amorphous hyaline substance in the superficial layers of the conjunctiva appearing first in the form of minute granules lying apparently on the surface of the connective tissue fibres rather than in the cells. Later these granules become aggregated into large masses, often continuous and visible to the naked eye as the yellowish or yellowish-grey spots characteristic of pinguecula. It is very resistent to chemical re-agents and resembles hyaline in its behavior. Further changes occur in this hyaline substance by which amyloid concretions are formed similar to those causing arcus senilis.

This hyaline degeneration of the connective tissue fibres occurs chiefly in the loose subconjunctival tissue and the fibres become enlarged and tortuous. The elastic fibres in the area of the pinguecula become hypertrophied and undergo hyaline degeneration, as do also isolated superficial fibres of the sclera, more especially those concentric with the corneal margin.

OPERATIVE TREATMENT OF GLAUCOMA.

Collins (R. L. Oph. Hosp. Reports, Dec., 1891.) gives some interesting conclusions based upon the pathological examination of twenty-three eyeballs which had been operated upon for glaucoma, chiefly by iridectomy. Assuming that the tension in primary glaucoma, however it may arise, is kept up by the apposition of the root of the iris to the posterior surface of the cornea and a consequent blocking of the filtration angle, Collins infers that an iridectomy may remedy the condition in either of three ways:

1. When the apposition is recent, very slight means may suffice for the escape of the aqueous, a drag on the iris being often enough to loosen the attachment.

2. In recent or acute cases the iris may tear away from its extreme root, thus leaving a large portion of the filtration area free for drainage, even should the remainder of the iris keep its faulty position.

3. In other cases a permanent gap is maintained in the walls of the globe by the prolapse of a fold of iris into the wound. Subsequent stretching or atrophy of the iris tissue occurs, or periodic rupture of the same, thus allowing the aqueous to pass through into the subjunctival tissue and thus become absorbed.

A sclerotomy may produce a permanent reduction of tension in either the first or last of these ways, or it may open up a fresh means of access to the filtration area, so that excess of fluid could find a direct channel of exit from the posterior chamber. It is unlikely that the fibrous tissue of a cicatrix should more easily allow filtration through it than the ordinary tissue of sclera or cornea. Iridectomy or sclerotomy will fail to relieve tension when none of the above results are attained. An iridectomy may also fail in consequence of displacement forward of the lens, so that its upper part blocks the freshly-opened filtration area, adhesions resulting between it and the sclero-corneal cicatrix. The practical lesson is the advisability of an early iridectomy before the apposition of the root of the iris has resulted in adhesion, or a preventive iridectomy might be done, as in the majority of cases primary glaucoma affects both eyes. Iridectomy is most likely to succeed where there is least adhesion of iris root and cornea.

OPERATIVE TREATMENT FOR THE RAPID CURE OF DACHRYOCYSTITIS.

Guiata (Hirschberg's Centralblatt, January, 1892,) describes an operation for this ordinarily tedious trouble which he has performed over three hundred times in the past five months. It consists essentially in opening and scraping the lachrymal sac, and then introducing a decalcified bone cannula into the duct to serve as a drainage-tube during the healing of the wound. The cannulæ are best made from the bones of the hind legs of large toads, which even after decalcification are sufficiently resistent, and by their thickened articular ends are prevented from slipping downward in the duct after their introduction. One can also make use of the tibia, ulna or radius of rabbits. These may be made somewhat more resistent by continued soaking in alcohol with ten per cent. iodoform ether. It is unnecessary to say that one should have a large assortment of these tubes in order to select a suitable one for each case. Their outside diameter may vary from 2½ to 4 mm., but anything smaller easily becomes plugged and useless. The steps of the operation are as follows : A direct incision into the sac, division of the stricture of the duct, thorough scraping of the sac with a small Volkmann's spoon, cleansing of the cavity with bichloride solution (1-2000), and lastly the introduction of the cannula. This may be best done by means of a Weber's conical sound, which can be withdrawn after the tube is in position. The wound is closed with one or two stitches, the bone tube being allowed to absorb. The after-treatment consists in the application of cold bichloride compresses. There is usually little reaction, and if no very acute inflammation of the sac exist, four to six days usually suffice for the cure. Should there have been an acute dachryocystitis, it is advisable to make two sittings of the operation. The sac may be incised, scraped and tamponed with iodoform-gauze. A few days later, when the more marked signs of irritation are past, one can divide the stricture, repeat the scraping of the sac and introduce the cannula. The course of such cases is entirely satisfactory and healing results in about ten days. Experiments on rabbits showed that the bone-drains were already softened and thinned after five days, and that fifteen days sufficed for their complete disappearance. It is, however, probable that the softened cannula is partly or completely extruded through the nose before complete absorption occurs. While a sufficient time has not yet elapsed to pronounce upon the permanence of the cure, the continued favorable condition of those operated upon warrants hope in this respect.

DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

Attending Physician, Department Throat and Nose, Dispensary of L. I. C. Hospital; Instructor in Diseases of the Throat and Nose, New York Post-Graduate Medical School and Hospital.

THE RELATION OF LARYNGEAL CATARRH TO LARYNGEAL PHTHISIS.

R. Norris (Wolfenden Jour. of Laryngology, Nov., 1891). There may be active epithelial destruction in the larynx of a non-specific character. The condition termed by Virchow, Pachydermia Laryngis Diffusa, is an illustration of this. It consists of a primary epithelial thickening, which may be followed by involvement of the mucous membrane, perichondritis and ulceration. It occurs where the laryngeal cartilages lie most near the surface, the mucous layer being very thin and covered by squamous epithelium, such are the edge of the epiglottis, the inter-arytenoid space, the processus-vocales and edges of the vocal bands. During the ulcerative process a strongly-marked catarrh of the larynx exists, the erosions may be deep, having gray bases and red elevated edges. They rarely involve the vocal bands, as do tubercular ulcers. The acute form may develop very rapidly; it leaves slowly, the ulcers being frequently six to eight weeks in healing.

The symptoms consist of burning pain in the throat, hoarseness, sensation of dryness and expectoration of blood-stained sputum. These cases of ulcerative pachyderma do not pass into laryngeal phthisis. Catarrhal laryngitis may occur in a phthisical subject and be non-specific. Chronic catarrh of the throat, however, acts as a predisposing cause of laryngeal tuberculosis, by lowering the resisting power of the laryngeal mucous membrane, or by causing erosions which absorb the infectious materials. The invasion of a larynx by tuberculosis, is indicated by the following characteristics. Marked anæmia of the larynx and pharynx, which may be distinguished from simple constitutional anæmia by its dead yellow-white color and by its absence in the mouth, lips and face. The vessels of the larynx often stand well defined on the anæmic surface, and there is often paræsthesia of pharynx. Localized congestion of the faucial pillars, or of one vocal band, is important if associated with pharyngeal anæmia. These symptoms with laryngeal catarrh may constitute the only throat indications during the pulmonary affection, more commonly if the throat be at all implicated in the disease the process advances to infiltration and ulceration.

TREATMENT OF RETRO-PHARYNGEAL ABSCESS IN INFANTS.

(Bilton Pollard in Lancet, February, 1892). Retro-pharyngeal abscess is not always dependent on spinal disease. In the latter the abscess occurs under the muscular structures in close contact with the vertebræ, in the former the pus is found in the cellular tissue between the pharynx and the prevertebral muscles.

The disease is not common, but merits attention from its possibly serious termination if not discovered. Evacuation of the abscess through the mouth has not proved satisfactory, on account of the difficulty of maintaining drainage.

The method recommended is to make an external incision along the posterior border of the sterno-cleido-mastoid muscle near its superior attachment, and carried through the superficial structures until the floor of the posterior triangle is reached; the great vessels and nerves are then separated by blunt instruments and a finger is introduced into opening so deeply that it can be felt by a finger in the mouth of the patient, to be against the pharyngeal abscess.

A director is then thrust into the abscess through external opening and a drainage-tube is inserted. The result is almost immediate and is permanent. As the abscess cavity heals, a smaller and shorter tube may replace the one first introduced.

This is the operation advised by Prof. Chiéne, who claims more perfect antisepsis for it than is possible in oral incision.

CHILDREN AND THEIR DISEASES.

BY FRANCIS H. STUART, A.M., M.D.

CHOREA AND ITS RELATION TO RHEUMATISM.

In the International Clinics, April, 1891, p. 213 f., Sir Dyce Duckworth, M.D., LL.D., gives the histories of four cases then under his care in St. Bartholomew's Hospital.

Case I.—Maid, æt. thirteen. Attack is associated with rheumatic pains, as was a previous one three years before; no rheumatic fever; a delicate, excitable child. The family history is of great interest: Grandfather died insane; mother had rheumatic fever twice and chorea at ten years of age, but no heart disease; maternal aunt had chorea and heart disease; maternal grandmother had rheumatic fever; one brother had rheumatic fever twice and chorea three times; three of her brothers or sisters died in infancy in convulsions. Has marked systolic murmur at apex; chorea so violent as to require the patient to be fed. Under treatment by arsenic the choreic movements grew markedly less and the cardiac murmur almost disappeared in two months.

Case II.—Maid, æt. thirteen. Six years before had a "low fever," which confined her to bed for a month. No positive history of rheumatic fever. Family history: Father had rheumatic fever, but no heart disease; two paternal uncles and the maternal grandmother died of heart disease. Has a presystolic and systolic murmur at apex; has effusion in both knee-joints and pain in left ankle-joint, an obvious rheumatic arthritis; was unable to speak for five days. Under salicylates at first, and then arsenic, the patient made progressive improvement.

Case III.—School-girl, æt. thirteen; been laid up for a month before with rheumatic pains, but no articular swellings; not spoken but very little for several days. No family rheumatic history could be obtained, though that is not proof that none exists. Loud systolic murmur heard at apex and in axilla, which later became musical. A few days after admission had elevation of temperature and rheumatic pains in several joints, as well as pericardial friction sound.

Case IV.—This one proved fatal from the exhaustion induced by continued violent, uncontrolled movements. Female, æt. sixteen; four months before had rheumatic fever for three weeks. Family history showed that her mother had had two attacks of rheumatic fever since the birth of this daughter, and when a child at sixteen, had had rheumatism and chorea; the maternal uncle had rheumatic fever; father had it twice since the birth of this child; paternal grandfather also had it. Admitted to hospital on December 5th, and died suddenly on the 14th. Autopsy showed some valvular rheumatic changes. Dr. Duckworth remarks that chorea "commonly proves fatal to those of either sex who have just passed the onset of puberty."

With Dr. Broadbent, the author regards chorea as a *symptom*, not a disease. Its most common determining cause is rheumatism. Other causes are over-work, anxiety, sudden fright and emotion. The subjects are usually children, lean, delicate and insufficiently nourished. They are generally nervous in temperament and are bright eyed and quick witted.

Dr. Duckworth gives an interesting argument to prove that rheumatic fever is a nervous disease, and that chorea, with the commonly attendant heart lesion, is a marked manifestation of this fact. The great usefulness of arsenic in chorea is well recognized; and it is equally true that in many cases of chronic rheumatism it is a most useful remedy, promoting nutrition and bringing about a more stable condition of the nerve centers, and thus it counteracts the conditions on which these states mainly depend.

Sleep is very important in the treatment of chorea, and chloral hydrate is recommended for securing this. Nutritious food is of great importance.

[The combination of arsenic with iron, as arseniate of iron, together with the administration of a *palatable* preparation of cod-liver oil have been of most service in my experience. It is very important not to push the cod-liver oil when it does not agree with the young patient; but when it can be taken in connection with other nutritious food, it is an excellant adjuvant.—F. H. S.]

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

SAUNDERS'S POCKET MEDICAL FORMULARY. By W. M. Powell, M.D. Philadelphia: M. B. Saunders, 1891; $1.50; pp. 261.

In this formulary are 1,734 prescriptions which have been employed by many of the eminent men of America and Europe, arranged with reference to the disease for which they have been prescribed. In addition there are posological tables, formulæ and doses for hypodermic medication, poisons and their antidotes, diameters of the female pelvis and fœtal head, obstetrical tables, etc. We know of no way to determine whether such formulæ as are contained in this little volume are much employed by physicians or not, but it is certainly an irrational method by which to practice medicine. It is possible that in exceptional cases, when the usual treatment has failed, some valuable hint might be obtained from such a collection of prescriptions, but otherwise we think the tendency of such books is opposed to the thorough study of drugs and their physiological action, and so far they are not to be encouraged.

"INTERNATIONAL CLINICS" (Quarterly). July, 1891. Vol. II.: J. B. Lippincott Company, Philadelphia.

To find thirty-nine topics, many of them general in nature, treated in 350 pages, suggests inadequate consideration of some; yet this doubtless gives greater space to each than does the average journal article. This does not include five pages of illustrations nor the biographical sketch with excellent portrait of the late Prof. Leidy. Again, the ex-cathedra type of lecture can only be worth printing when it comes from recognized and advanced teachers. This condition is surprisingly well met in the "International Clinics," and moreover, all but three of these papers are by Americans. It is, however, to be hoped that this field will not now be overrun by imitations, as all too soon they would then of necessity degenerate into the nauseous hash that is so often used by the journals as padding.

The subjects themselves are in the present volume selected from nearly the whole field of medicine, though a large share properly falls to surgery and neurology. (Medicine, seventy-nine pages; Surgery, seventy-five; Gynæcology and Obstetrics, seventy-one; Neurology, ninety-seven; Ophthalmology, eight; Dermatology, five; Otology, fourteen.)

Dr. Pepper leads off with two cases of ulcerative endocarditis, the micro-organism in one being the white and in the other the yellow pus staphylococcus. Wilson, on cold bathing in typhoid, takes up fourteen pages. Stricture of the urethra is considered from different points by Simes of Philadelphia and F. R. Sturgis. Dr. Skene gives three cases: 1. Removal of Tubes and Ovaries; 2. Acquired Anteflexion of Uterus; 3. Ventral Fixation of Uterus; each, of course, with instructive remarks. There is a very interesting paper by Bland Sutton, of London, on "Effects of Double Ovariotomy and Oöphorectomy on the Secondary Sexual Characters of Women," and an excellent, though over-condensed article on "The Methodical Examination of Patients with Diseases of the Nervous System," by G. L. Walton of Boston. Plenty of others, doubtless equally good, serve to complete this valuable number.

WILLIAM BROWNING.

CORRESPONDENCE.

PRESCRIBING OF PEPSIN.

To the Editors of THE BROOKLYN MEDICAL JOURNAL:

Your editorial on pepsin in the last number of THE BROOKLYN MEDICAL JOURNAL, points for me a moral on the awful uncertainties of language. I am sure that it was not my intention to say what you credit me with saying in my lecture before the Chemical Section of the Brooklyn Institute. My aim was to impress my hearers with the fact that about half the prescriptions, usually written for pepsin, sinned in some one of a number of ways, that of mixing with an alkali being the least excusable. A large number of bad inhibitors of its power had already been enumerated, when a pause was made to dwell particularly on the use of alkalies in such connection. I then summed up by charging about half with being vitiated in the ways named, and pointing out the further fact that pancreatin and trypsin were served even worse than pepsin. I have no desire to make a matter that is bad enough appear worse by exaggeration, and would, therefore, request you to be kind enough to publish this note in your next issue, to correct this wrong impression.

Very truly yours,

R. G. ECCLES.

DR. WALTER S. FLEMING AND THE BETTS CASE.

Dr. Walter S. Fleming, Medical Superintendent of Flatbush Insane Asylum, has received the following letter from Hon. J. O. Dykman, Justice of the Supreme Court, which completely refutes the reflection on the doctor made by a New York newspaper in connection with the Betts case:

"WHITE PLAINS, April 11, 1892.

"WALTER S. FLEMING, M.D.

"*My Dear Sir.*—Your letter of the 7th inst., respecting the Betts case is received, and I regret that any false newspaper rumor should have caused you annoyance.

"I never for one moment entertained an idea that you occupied any position or relation that would conflict with your independence as a commissioner, and I so stated in open court when the question arose.

"I had known all the lawyers for years, and knew them to be incapable of a dishonorable suggestion.

"The scheme of inquiry by commission was abandoned for reasons by no means personal.

"Hoping that this explanation will prove satisfactory to you, I remain,

"Yours, with respect,

"J. O. DYKMAN."

MISCELLANEOUS.

KATZENJAMMER.—Resorcin is said to act admirably in cases of nausea and depression following a carouse. It is given in the dose of from five to ten grains in plenty of water flavored with syrup of orange peel, and may be repeated once or twice at intervals of half an hour. A single dose of ten grains is, however, said to be usually sufficient.

FOR TENDER FEET.—Tramps, either amateur or professional, who suffer from sore feet after an unusually long walk, will experience great relief from soaking the feet once or twice a week in a half-pailful of hot water to which a piece of nitrate of potassium the size of a small walnut has been added.

Flatulent Dyspepsia is often greatly relieved by a mixture of equal parts of powdered sulphur, magnesia, phosphate of lime and charcoal. A teaspoonful of this powder is taken in a glass of water during an attack.

Sterility.—Not infrequently sterility in women depends upon an acid condition of the vaginal secretions. In such cases a vaginal douche at bedtime of two quarts of water, containing one ounce of bicarbonate of soda and three or four ounces of glycerine, will often lead to the desired result.

The above are abstracted from some of our contemporaries, but unfortunately we do not know which; if we are informed we will give due credit.

KELLY'S METHOD OF MANUAL DISINFECTION.

Scrubbing the hands with especial attention to the nails,—not more than one millimetre in length,—for ten minutes in water, frequently changed, at about 104° F. Immersion of the hands in a solution of permanganate of potassium, made by adding an excess of the salt to boiling distilled water, until every part of the hands and lower forearms is stained a deep mahogany red or almost black color. They are then transferred at once to a saturated solution of oxalic acid until completely decolorized and of a healthy pink color. Washing off the oxalic acid in warm sterilized water.

BROOKLYN VITAL STATISTICS FOR FEBRUARY, 1892.

By J. S. Young, M.D., Dep. Commissioner of Health.

Population estimated January 1, 1892, 880,780; Births reported, 1,296; Deaths reported, 1,656.

CAUSES OF DEATH.

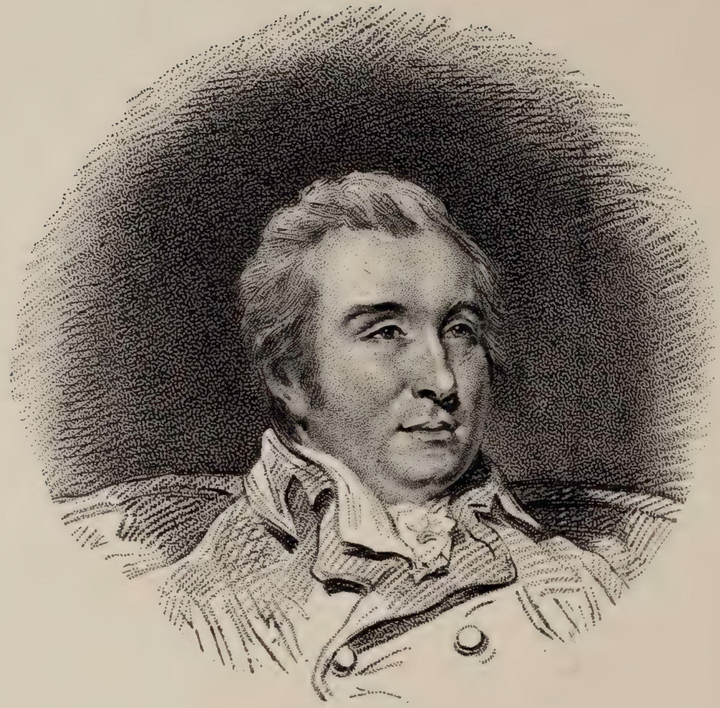
Croup, 31; Diphtheria, 83; Scarlet fever, 90; Measles, 11; Typhoid fever, 6; Whooping-cough, 5; Pneumonia, 249. Phthisis, 183; Cerebro-Spinal Meningitis, 10.

REPORTED CASES.

Diphtheria, 187; Scarlet fever, 504; Measles, 118; Typhoid fever, 30; Small-pox, 1.

DEATH-RATE FOR FEBRUARY, 1892.

Brooklyn, 23.66; New York, 25.99; Philadelphia, 26.01; Berlin, 21.10; London, 40.65.



MATTHEW BAILLIE.

This distinguished father of pathological anatomy was born in the county of Lanark, Scotland. His mother was the sister of William and John Hunter, and this connection was of great advantage to the aspirant for medical fame. Miss Joanna Baillie, who attained so high a rank in literature, was his sister.

While a student at Oxford, he spent his vacations with his uncle, William Hunter, in London, and it was through his influence that he took up the study of medicine instead of going into the church as he had originally intended.

Under the tuition of Dr. Hunter his progress was very rapid, as his learned preceptor took great pains to train young Baillie's mind to accurate knowledge of his chosen profession, and ready facility in imparting that knowledge to others. "Matthew, do you know anything of to-day's lecture?" Dr. Hunter would demand of his nephew, on returning from listening to one of Hunter's anatomical demonstrations. "Yes, sir, I hope I do." "Well, then, demonstrate to me." "I will go and fetch the preparation, sir." "Oh, no matter, if you know the subject really you will know it whether the preparation be absent or present." After this dialogue Dr. Hunter would stand with his back to the fire while young Baillie demonstrated the subject of the lecture which had just been delivered; and the student would be encouraged by approbation, or his errors pointed out, as the case demanded.

On the death of his uncle, Baillie succeeded to his lectureships, and continued to give great satisfaction as a teacher of anatomy for many years; but his rise into a successful London physician's practice was acquired gradually. His success in practice rose from his celebrity as an anatomical teacher, as well as his great acquaintance with the profession. These, together with his amiable manners, procured for him the friendship of many of the members of the faculty, and among others that of Dr. Pitcairn, whom he succeeded in the ownership of the "gold-headed cane," as well as a considerable portion of his business.

From this time he rose rapidly in business, being consulted by all classes of society, and in 1810 was appointed physician to His Majesty. His income reached £10,000 per year, and he might have increased it farther had he been willing to abandon some of his studies.

It is not as the successful London Physican that we have brought his portrait into our series, but as the first of modern times to take up and put on a solid basis the study of pathological anatomy, for which he had more than ordinary facilities, having not only his own superior training and skill, but also the rich store of material collected by his uncles. Pathologists to-day regard his great work on pathological anatomy as a treasure of honestly and accurately recorded facts, the plates to illustrate which were issued in fasciculi from the year 1799 to 1802, and are as accurate as any we have on the subject to-day. He died in 1823, leaving the whole of his valuable anatomical collection to the College of Physicians, and £600 for the preservation of it.

Dr. Baillie was the last of the line who carried the "gold-headed cane" of which we have spoken in the sketches of Radcliffe and Mead.

In a very old number of the *London Gazette* is found the following epigram, referring to the illness of King George:

"The King employs three doctors daily,
Willis, Heberden and Baillie;
All exceedingly skilful men,
Baillie, Willis, Heberden,
But doubtful which more sure to kill is
Baillie, Heberden or Willis."

THE

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ORIGINAL ARTICLES.

DENTIST, DOCTOR, AND DECAYED MILK-TEETH.

BY ROBERT L. DICKINSON, M.D.,

Lecturer on Obstetrics and Assistant Obstetrician to the Long Island College Hospital.

Read before the Brooklyn Dental Society, May 25, 1891.

I have the temerity to stand up here, less to answer questions, than to ask them. I, who do not know, dare to speak to you who do know. And my defence is, that as practitioners among young children we meet with certain difficulties pertaining to your specialty which are worth while to discuss because you cannot cure the cases without our help, and we cannot cure the cases without yours. Moreover, we both have been derelict—the doctor, in not insisting on sending the patients to you—the dentist, in occasional unwillingness to trouble himself with these little ones. I refer to children who have cavities of sufficient size and number to cause pain, and distinctly affect the digestion and general health. The child's one function is growth—therefore whatever hampers its food assimilation is a serious handicap in the jostle for existence.

THE CAUSES OF DECAY AND THE CAUSES OF NEGLECT.

I think we see little *syphilis* as a cause. To track it the doctor must usually be the detective, except in the few well-marked cases where a clear history is to be had of snuffles lasting several months, an eruption turning coppery, or attacking the palms and soles, perpendicular fissures in the lips, or collapse of the bridge of the nose, with the late dentition and old-mannish look.

Rickets we see oftener as the origin of late and irregular dentition and of carious teeth soon shed. The joints will oftenest point to the connection, from their enlargements—then the tendency to curvatures of the bones, or a wedge-shaped head, and late closure of the fontanelles may guide us truly. The beaded ribs, pigeon-breast, large abdomen, poor development, sweating about the head and proneness to bronchitis will warn us that radical constitutional measures are necessary to save the teeth and the digestion.

Of the importance of *heredity* dentist and doctor must warn the patient. If the tooth-forms are inherited, why is not the cell-form, and therefore the proneness to decay?

We doctors should be sufficiently watchful of *imperfect formation* to recognize deeply fissured teeth, or crowded teeth, or chalky teeth, and should send such cases promptly into competent hands.

As to the effect of *indigestion* on decay I find a weight of professional opinion in dental literature and in personal expression that is at variance with the ideas of the layman, and that does not coincide with my own experience. Indeed my attention has been mainly drawn to my topic by certain cases where the pampering of spoiled children has been followed by extensive decay, and where fairly good health and care of the teeth do not seem to have prevented the trouble. Simple candy, or sugar in moderation, should hurt no child, nor should plain cake when a little stale. But free indulgence in expensive candies and in cake and jams and pastry has been at the root of attacks of indigestion and diarrhœa in several of my cases where the teeth "went bad." The acid solutions of iron are credited with vigorous action on the teeth. Are the acid solutions of iron really harmful?

Finally, come two causes: *Lack of care, and ignorance.* Am I right in believing that the majority of you think that these local causes are the most important by far? May I say that the enamel is dissolved by the acids formed of fermenting food and that microbes then creep up the dentine-tubes wherever unmolested shelter invites these tramps to roost? Certainly we who teach germ-theories and antisepsis ought to believe it. It appeals to common sense. Parents have never been taught the great need of detailed care in cleaning teeth, and no one has laid stress to them on the importance of keeping the first teeth sound and filled for the sake of the alveolar process, the sac of the second tooth, the shape of the jaw, and the child's digestion.

THE CAUSES OF DELAY AND THE CAUSES OF NEGLECT.

1. The poverty or ignorance of parents. Filling children's teeth is imagined to be expensive work because the teeth are replaced in a few years, and the parent thinks the work will only have to be done over again. It is expensive of the dentist's time because so much of it must be given to cajoling the patient—and as people will not stand full fees for the time lost, dentists seem to me inclined to shirk their responsibilities in this matter. Am I wrong? I would willingly be convinced of it. I know of one dentist having tact with children who uses this method. The nurse brings the child in while the operator is busy and watches her play about the waiting-room and office until the strangeness has worn off and the curious machines interest her. On the next day she will go into the chair, then a few touches of a stick are supposed to be a treatment, and nothing more is done. The third day the easiest thing is put through, and last of all the painful treatments come in.

Treatment.—The radical cure is your business—the softer fillings that you use, and the treatment of complications. But ours is the responsibility of watching these patients and warning them—and we must treat the general diseases.

In cases of severe *indigestion*, where the teeth were wrecks, I have been obliged to resort to predigested foods such as pancreatized oysters, gruel, milk-toast, and sponge-cake—to milk, cream, beef-juice, scraped meat, egg-powder, bread-jelly, and the like—together with inunctions of cocoanut oil, in order to spare the stomach and yet nourish the child.

Toothache.—Where local applications fail we have three new drugs that have cut down a third on the necessity for giving opium, and that are a great boon among children, with whom opium acts so badly. Where there is no considerable nerve-inflammation they can be trusted to relieve within twenty minutes.

1. *Antipyrine.*—Soluble in water;—dose, fifteen grains for an adult (five grains for a five-year-old child). Objections: Expensive, bitter; thirty to sixty grains in the adult may produce severe prostration, especially with a weak heart.

2. *Acetanilid, or Antifebrin.*—With little taste, insoluble, not expensive;—dose, five grains for adult,—two for five-year-olds

Objection: Twelve to twenty grains to adult may produce blueness and pallor and prostration.

3. *Phenacetin.*—Tasteless, insoluble, moderate in cost;—dose, ten grains to adult, repeated in half an hour if required,—three grains at five years, repeated; forty grains to adult may produce sweating and prostration. Phenacetin is safest, and pleasantest for children, having no taste. All three are put up in tablets by Wyeth, and Frazer.

Printed schedule of directions.—I venture to suggest to you a plan that I have never happened to see carried out in your field, though it serves an admirable purpose in ours. It is good science and good business. I show you some printed cards—careful and detailed instructions,—one for the sick-room, one for indigestion, one for obesity, another for diabetes. Dr. Jewett has had this little pamphlet on child-bed printed, and this card for artificial, or bottle-feeding. This printed list of necessities I leave at a house the day before an operation, to be sure nothing is omitted. In all these the statements are terse and mandatory. Where it is desirable we check the diet permitted or the articles required. Why should you not do likewise? Here is an attempt, which I have much hesitancy in submitting, but which will serve for you to open fire upon.

ABOUT MILK-TEETH.

If you care for symmetry of feature and sweetness of expression in the lower half of the face; if you appreciate one great beauty in the laugh and the speech of a child, and are hurt to see stumps and gaps in the small mouth; if you have any care on the score of pronunciation; if you are assured that tartar often causes retraction of the gums and loosening of the teeth; if you have ever seen abscess followed by scars on the face, or roots projecting through the gum; if indigestion and its far-reaching effects on growth and strength seem undesirable to you—and, finally, if you wish small dentist's bills for regulating and filling the second set:

Then you will follow these directions—which are essential in every detail:

1. In the early months (about fifth to twelfth) clean twice daily with soft rag and lime-water.

2. Later (about twelfth month) brush with small soft brush after each feeding.

3. Later (about fourth year) teach child to use quill-pick after each meal, and then to brush carefully the most hidden crevices with lime-water, or use waxed silk instead of the tooth-pick.

4. Polish off all stains with soft pine stick and tooth-powder.

5. Take the child to your dentist every three months, beginning at the second year, and have cavities searched for and filled. By having cavities filled early child suffers none during operation.

Every tooth after the twentieth tooth belongs to the permanent set. These are all in position by the third year. The first permanent teeth are back of these, appearing usually between five and six.

Establish habits early and firmly and the child will keep them.

Forbid rich candy, fresh or rich cake and pastry and hot bread.

Let the child strengthen its teeth on sufficient crusts and on meat not too tender.

WHAT TO DO FOR TOOTHACHE.

1. Rinse the mouth and the cavity thoroughly with warm water in which is dissolved all the baking soda it will carry; failing,

2. Dry the cavity gently with surgical cotton (absorbent) made into a swab on the end of a knitting-needle or crochet-needle, and

3. Drop one drop of creasote or pure carbolic acid on a bit of absorbent-cotton and pack it gently into the cavity.

4. A small capsicum plaster (1-4 inch square) bought at the drug-store may be placed on the gum. If the tooth is sore to bite on, No. 4 is best.

5. Take the child to the dentist to find out what should be done to the teeth.

ANOTHER CONTRIBUTION TO CEREBRAL SURGERY.

BY EDWIN A. LEWIS, M.D.,

Surgeon to Long Island College Hospital and Brooklyn Hospital.

Read before the Brooklyn Surgical Society, February 4, 1892.

The indications for operation on the cranial vault are, ordinarily, so clear and well understood that I do not wish to take your time by discussing them. The technique of the operation is also so clear and well understood that I do not wish to rehearse it. Certain unusual facts in both history and treatment have led me to think this case one of sufficient interest to present in detail. It seems to present a difficulty in reconciling history and fact. It seems to show that motives of revenge or vindictiveness may influence a patient or his friends to either color a true history or even give a false one to the surgeon and thereby mislead him. It seems to emphasize the necessity to the surgeon of possessing a judicial mind, whereby he can properly weigh evidence and arrive at a conclusion warranted by facts.

John D., age twenty-four, native of United States, laborer, married, was brought to Brooklyn Hospital by ambulance, October 3, 1891. On admission it was observed that he was weak, emaciated, hardly able to walk, and that his mind was clouded. He was suffering from loss of power in all his extremities, more noticeably in the lower, and most of all in the right lower. The only history was obtained from himself by careful questioning. He said he had been ill and gradually losing strength, *especially in the lower limbs, for some months*. He complained of suffering from pains in the head and shooting pains in the lower extremities and around his waist. No mention was made of having received any injury.

He was treated by rest in bed and good food. The principal medicine exhibited was bromide. He was very restless and did not improve. Became weaker and more restless and complained of much headache. October 11, he had two epileptiform convulsions and his condition became precarious. Then appeared his wife and father, and said that on September 7, about eight weeks before his admission to the hospital, he had been struck on the head by a bottle and had received a wound. At that time he went to the hospital and had his head sewed up and returned home. The next day he complained of pains in the head, vomited several times, and went to bed, where he remained three weeks. After that time he was up and about some, but was unable to do any work. Did not gain strength and seemed to be losing his mind. He had been, they said, before the injury a healthy man. This was a direct contradiction of the history he had given of himself, but then, his mind was not very clear and it seemed that he might have been mistaken in his account of himself, although he was questioned very carefully. The ambulance surgeon then remembered that he had sewed up a small scalp wound on this man's head on September 7. There was not the slightest evidence of fracture at the time, but, until after the subsequent operation, he—the ambulance surgeon—was anxious for fear he had overlooked a fractured skull. A careful examination of the patient's head disclosed a trivial scar over the left parietal eminence. In view of this more recent history, and the fact that the patient was rapidly losing ground, it was decided, on consultation, to operate with the hope of giving relief. After his head had been shaved no irregularity could be discovered in the bony vault. Several slight scars showed on the scalp. The one received last and to which his present condition was, presumably, due, was situated over the left parietal eminence. All antiseptic precautions were taken of course. The steps of the operation were, as follows, on October 13, 1891 :

1st. Removal of a button of bone by half-inch trephine, about one inch to the left of sagittal suture over parietal eminence. The button of bone was perfectly healthy. No evidence of any fracture or any injury. The dura underneath seemed also perfectly healthy.

2d. Introduction of an aseptic hypodermic needle into brain tissue underneath. The brain seemed firm and no fluid of any kind came into the hypodermic syringe when the piston was drawn.

3d. As his paresis was most marked in the lower extremities, and especially the right, another similar button of bone was removed over the fissure of Rolando about one-and-a-half inches diagonally forward and downward from the first opening. Here too all tissues seemed healthy, *i.e.*, both bone and dura.

4th. The hypodermic needle was again introduced, but as before, with no result.

5th. The bridge of bone between the two trephine openings was removed; thus exposing about two inches of dura mater. The appearances were those of health.

6th. The dura mater was incised along its whole exposed surface allowing the brain to protrude. The brain tissue seemed normal.

7th. The aseptic finger was carefully inserted into the wound to find if any tumor or fluctuation could be observed. Nothing found.

8th. Wound closed without replacing bone or closing dura mater.

As to the wound, I may say that there is nothing to note. It healed by first intention without the formation of a drop of pus and was well in a few days.

But as to the operation; what had we accomplished? We had not found a thing abnormal. If there was internal pressure, we had to that extent given it vent. The patient showed no change in his condition at first, but, for a few days, complained of great headache. This was relieved by the bromides and chloral. After the first few days he began to improve sensibly. He began to be clearer in his mind, and, by degrees, to regain power in his limbs. As his strength increased a temporary condition of hyperæsthesia of the lower extremities developed. This gradually passed off and he was able to be up and about the ward, November 20, five weeks after the operation. His improvement, both mental and physical, though gradual was progressive, and he was discharged from the hospital December 18.

Since that time he has been gaining. Though not able to work yet, he is keeping up his strength and promises to become as strong and well as ever. He can now walk well. His extremities are well nourished and strong. His conversation is clear. It would seem that his intellect is not far from its normal standard.

Now certain questions arise: What was the lesion? How did the operation relieve? Was his condition solely the result of the blow? or, Is there some truth in his original statement that he had been in failing health for sometime before the injury? I confess my mind is not entirely made up.

There is no doubt that he received a blow on the head, for the scar remained, and the doctor who attended him remembers it well. But how much had that blow to do with his subsequent condition? A somewhat extensive and carefully conducted operation fails to reveal the slightest lesion to the cranial vault or brain itself at the points where these would be expected. The fact that the person who struck him is now out on bail and likely to be tried at anytime for the assault might be an argument for referring his whole trouble to the injury, when really there was something the matter before. It is true there may have been some deeper injury that the operation could not detect. The symptoms pointed to trouble with the motor area near the paracentral lobule, as the lower extremity of the opposite side was most affected. But ocular inspection of the brain substance in this whole region failed to show anything abnormal.

It seems that it may be asserted with reasonable certainty—

1st. That something was causing pressure inside the cranial vault in the neighborhood of the operation.

2d. That the operation relieved the pressure, and hence allowed the improvement noted.

I know this surely, that, whereas he *was* in a critical condition and failing fast, *now* he is practically recovered; therefore, I conclude the surgery was good.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The business committee of this society has been organized for the meeting of February, 1893, by the appointment of Dr. Seneca D. Powell, of No. 12 West Fortieth Street, New York City, Chairman, and Drs. William Maddren, of Brooklyn, and John O. Roe, of Rochester, Associates.

The programme for the scientific work of the session is already well advanced in its preparation.

SOME REMARKS ON PULMONARY TUBERCULOSIS, WITH ESPECIAL REFERENCE TO OUR MOST RECENT KNOWLEDGE ON THE SUBJECT.

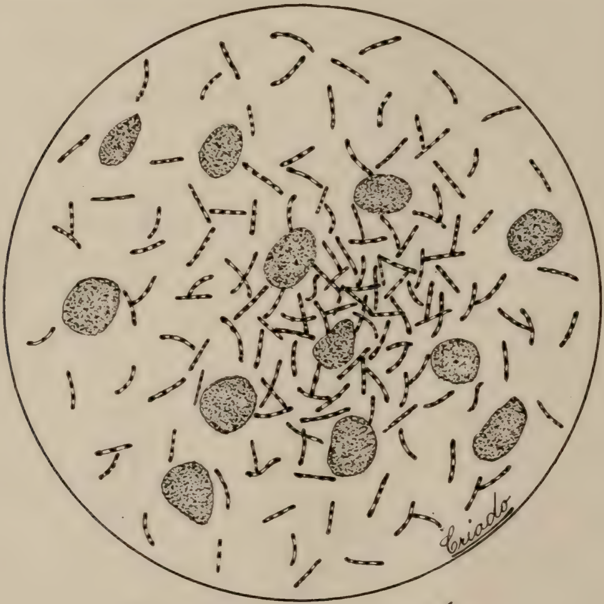
BY LOUIS F. CRIADO, M.D.

Read before the Kings County Medical Society, February 16, 1892.

There is, possibly, no subject in medical literature tending to prove as conclusively the never-ceasing scientific perseverance of the medical profession in search of definite knowledge, nor any, indeed, having caused greater bewilderment amongst diligent pathologists and experienced clinical observers than the one that we are about to take into consideration.

Most of us are necessarily well acquainted with the voluminous investigations of such veteran students as Bayle, Lænnec, Charcot, Schuppel, Pollender, Wagner, Pasteur, Villemin, Friedlander, Klebs, Cohnheim, Virchow, and many others; but, for our most recent and valuable knowledge as to the cause and nature of tuberculosis, we are indebted to Koch, who in the year 1881 made known to the world his discovery of certain microscopic specific bacteria, belonging to the group of bacilli, and hence, most appropriately named the *bacillus tuberculosis*.

The tubercle bacilli may be described as consisting of short, straight, or slightly curved rod-like bodies, rounded at the ends, and measuring about one-third as long as the diameter of a red blood-corpuscle. They are not always observed beaded, but likewise in pairs, in bundles, or singly. We can detect them in the sputa, blood, urine and pus; we know them to be associated with tuberculosis of the lungs, intestines, kidneys and other organs; with certain bones, joints, lymphatic glands and skin diseases, and to be precisely the same bacilli affecting animals with the disease known as the *pearly distemper*. The tubercle bacilli can be cultivated artificially and most readily in a nutrient medium of solid blood serum, at a temperature of from 98° to 100° F.; notwithstanding the same possibility at a varying temperature of from 86° to 105° F. Very minute portions of bacilli of pure culture inoculated into the subcutaneous tissue, into the pleural or peritoneal cavity, into the anterior chamber of the eye, directly into the blood stream, and otherwise, have caused artificial tuberculosis within the period of three or more weeks; thus, apparently proving that these microscopic vegetable organisms must be regarded as the specific cause of tuberculosis. The natural conditions essential for the development of the bacilli are alone to be found in the animal body under certain conditions; but withal, the fact most worthy of consideration is that these minute organisms have a very tenacious vitality, capable of withstanding the chemical action of most acids, and of preserving their virulence and necessary requisites for development for many weeks in decomposing sputum, and for months in the dry state. The infective power of tuberculous matter is not destroyed by desiccation, freezing, or putrefaction.



Bacillus Tuberculosis.

To burden this paper unnecessarily with the symptomatology and diagnosis of pulmonary tuberculosis would certainly prove an imposition on my part; but we must at least refer to some of the most important factors serving to establish, not only the *existence or non-existence* of this much dreaded disease, but likewise, the *indispensable clinical necessity of the microscope.*

1. It is not an exceptional rule, but a fact, that skilled physicians are oftentimes confronted with cases in which the diagnosis by means of the most careful physical examination proves futile; thus, for instance, in the so-called first stage of pulmonary tuberculosis, or in disseminated pulmonary tuberculosis, where we have to

contend with numerous peribronchial nodules disseminated over most of the entire lung, and still a good deal of normal tissue exists, physical signs—percussion and auscultation—will *not* reveal the true condition of the organs; percussion yielding no dulness, and auscultation at most diffuse rhonchi. Dr. Dobell states: "If physical diagnosis could detect consumption as soon as the first few spots of tuberculous matter were deposited in the lung with the same certainty that it detects pneumonia or a cavity, we might well be content to sacrifice for this all that it could do besides. But that it cannot, in its present state accomplish this, and that there is no good reason to suppose that it ever will accomplish it, need surprise no one who will think calmly on the subject." It is in such cases as these that the *examination* of the *sputa* and the detection therein of the *bacillus tuberculosis* becomes of *great importance* as *demonstrative proof* of the *existence* or *non-existence* of pulmonary tuberculosis; even in such cases as those in which the symptoms and physical signs may have proved *apparently* conclusive.

2. In assuming the detection of the bacilli in the sputa as conclusively demonstrative, it should be borne in mind that the bacilli *are not* invariably present in the sputa of individuals affected with tuberculosis; in some specimens they may be absent and in others present, hence, repeated examinations should be made, and if the bacilli cannot thus be detected, we may be justified in excluding the possibility of tuberculosis.

3. Pulmonary tuberculosis might be inferred as *actively progressing*, if on repeated examinations of the sputa the bacilli are found in abundance; likewise it may be judged that the disease is *not progressing actively* if the number of bacilli have *diminished considerably* and but *few* can be detected.

4. In all cases of pulmonary tuberculosis the sputa of which have revealed the presence of the bacilli, if in the course of time and after repeated examinations *none* can be detected, it may justly be inferred that the disease no longer exists, and that recovery or improvement may follow, notwithstanding the possible continuance of some cough, expectoration and general suffering, which symptoms might be ascribed to incidental lesions.

It becomes, hence, most apparently evident that the *absence* of the bacillus, its *presence*, *increase*, *diminishment*, and finally, its *absence* from the *sputa* of such patients in whom it previously existed should be regarded as *important contributive factors* in establishing not only the *diagnosis*, but likewise the *prognosis* of pulmonary tuberculosis. I am fully aware of the fact that a considerable amount of time and patience, and moreover, some microscopic *technique* is required in order to successfully undertake the aforesaid investigations. I am, likewise, acquainted with the prevailing unpardonable fashion of our generally delayed insufficient compensation and many lingering promises; but withal, should it not be our duty as members of the least selfish, most sacrificing and charitable profession,—invariably required, much admired, but *soon forgotten*, —to resort to wisdom and pursue knowledge?

Since the discovery of the bacillus tuberculosis, numerous methods have been suggested with the intent of simplifying its recognition, which is dependent upon the remarkable property which the bacillus possesses of being stained with aniline dyes in alkaline solution, and in retaining the dye in the after treatment with acid and alcohol. Amongst the various methods may be mentioned that of Koch, Gibbes, Ehrlich, Neelson, Baumgarten and others; but for clinical purposes Gibbes's rapid double stain is the most satisfactory and obviates the use of nitric acid. The stain is made as follows: "Take of rosanilin hydrochloride, 2 grammes (31 gr.); methyl blue, 1 gramme ($15^{1}/_{2}$ gr.); rub them up in a glass mortar. Then dissolve anilin oil, 3 cc. (48 minims) in rectified spirit, 15 cc. (℥ss.), add the spirit slowly to the stains until all is dissolved, then slowly add distilled water, 15 cc. (℥ss.); keep in a stoppered bottle." Whenever it is desired to examine the sputa, the following directions should be observed, which are practically Gibbes's, with but few interpretations. Place a small quantity of the suspected sputum upon the centre of a carefully cleansed cover-glass, and with another clean glass firmly press upon the first until the sputum is equally distributed upon the surfaces of both glasses; separate the covers and allow them to dry in the air protected from dust. When the specimen is wanted for diagnostic purposes at once, it may be dried over a small Bunsen, but for preparations that are to be kept for reference, it is better to dry the sputum slowly in the air. When thoroughly dry, pass the cover-glass two or three times through the flame of a small Bunsen or spirit-lamp. The sputum having been dried on the cover-glass, a few drops of the stain are poured into a test-tube and warmed; as soon as steam rises, pour into a watch-glass, and place the cover-glasses—one first, then the other—sputum side downwards on the stain. Allow them to remain for four or five minutes, then wash in methylated spirit until no more color comes away; drain thoroughly and dry, either in the air or over a spirit-lamp, and mount in Canada balsam. The stain can be used cold equally well. The cover-glass in that case must be kept in the stain for at least half an hour. The sputum used should be that coughed up by the patient the first thing in the morning, as later on it may only come from the back of the throat. The sputum should be spread as evenly as possible, and not too thickly.

A most interesting and, moreover, important ætiological question is the following: Is pulmonary tuberculosis a contagious disease capable of communicating its virulence from one person to another; and if so, considering its unremitting and great prevalence, why is it not, of all diseases, the most contagious? I believe that it is generally becoming admitted that the disease is of a contagious nature, and that in due consideration of its great prevalence that it is an impossibility to avoid the inhalation of the bacilli prevalent under almost all conditions in the atmosphere; but withal, it is most earnestly contended that the bacilli cannot thrive in the healthy animal body, and hence cause any material damage or disease *without* the coincidence of some predisposing cause or susceptibility. Dr. Weber observes: "We have no doubt that the bacillus is intimately associated with phthisis, but the exact relations appear to require still further elucidation. It is, for instance, not quite clear why the tubercle bacillus thrives in some persons and not in others; or why in some persons it thrives at one time and not at another. We know that it thrives in the bodies of most warm-blooded animals when inoculated, but this does not prove that it will find a nidus in a healthy tissue when merely brought into contact with it by the surrounding air." Flint remarks: "The parasitic doctrine cannot disprove facts which render certain the existence of a tuberculous predisposition or diathesis. This predisposition or diathesis involves certain local conditions on the concurrence of which the development of the disease depends not less than on the presence of the special causative agent, that is, the bacillus tuberculosis. For growth and multiplication the parasitic organism must have a suitable soil. The suitable soil consists of the concurrent local conditions on which the development of the disease depends. The nature of these conditions and in what way they constitute the constitutional predisposition or diathesis, our present knowledge does not enable us to comprehend. Their existence and the necessity of their concurrence with the presence of the special cause, are logical conclusions based on clinical experience. The immunity from the disease depends on the absence, not of the bacilli, but of that susceptibility due to the unknown concurrent conditions which constitute the tuberculous predisposition or diathesis." Powell states: "Even Koch himself believes that certain pathological changes are, if not necessary, at least highly favorable to the reception of the germ." The foregoing quotations precisely coincide with my opinion, *possibly* on account of my comparatively limited experience; but withal, I judge them sufficiently evident, and within the sphere of our present knowledge, reasonably conclusive as to the contagiousness or non-contagiousness of pulmonary tuberculosis. My own personal experience and observation prompt me not only to corroborate the admitted and conclusively proven fact that *pulmonary tuberculosis cannot* and *does not* exist *unless* the bacilli be present, but likewise to state, that I am most earnestly convinced that the disease is *not*, as ordinarily acquired, solely due to the presence of the bacilli in the atmosphere inhaled and their reception in the animal body, but to individual susceptibilities, superinduced by certain concurrent, coöperating or predisposing causes; inherited, congenital, acquired, due to atmospheric conditions, depressing emotions or otherwise. Clinical experience has tended materially in establishing the fact that the offspring of consumptive parents are prone to become tuberculous, and hence that the disease is due, in a considerable proportion of cases, to a congenital or inherited diathesis. How this congenital or inherited diathesis is produced, or what its real nature is, has been and is to this day a most interesting problem. It has been claimed that it may be due directly to contagion from the parent subsequent to birth, through the milk, or to the transmission of the virus, as with syphilis, and manifesting itself in early life in the form of scrofula or otherwise; but withal, we cannot positively offer any clear scientific explanation as to why the transmission of this disease, from parent to child, should occur at a certain age, any more so than as to why a certain mental character or physiognomy is inherited. It appears most reasonable to assume, however, that the soil favorable to the development of the disease is inherited, and that it is thus that a predisposition is constituted. Certain diseases, such as typhoid fever, measles, whooping-cough, etc., etc., appear to exert an influence in leaving the system in a condition favorable for the development of tuberculosis; likewise, the frequent tendency to catarrh of the respiratory organs. Frequent alteration of temperature, sedentary pursuits, defective ventilation, improper and insufficient food, mental strain, humid atmosphere, insufficient or improper surface drainage, dusty employments, neglected colds, etc., etc., I believe causative to a tuberculous predisposition, and to constitute a susceptibility to the action of the specific cause, without which susceptibility immunity from the disease must be regarded as reasonably certain. If the *dictum* is that the bacillus is a *contagium vivum*, I again would question, why is this not, of all diseases the most contagious, in view of the fact of its unremittance, great prevalence, and under ordinary conditions in life, of the utmost impossibility of avoiding the inhalation of the bacilli prevalent under almost all conditions in the atmosphere? If the parasitic doctrine be wholly accepted, how can we clinically, or otherwise, scientifically explain the comparative immunity from this much dreaded disease amongst physicians, nurses, and other constant attendants who are frequently and continuously exposed, not only to an atmosphere ordinarily supposed to be charged with the specific cause of the disease, but to one very much more so, to the direct emanations of the breath of tuberculous patients. The only possible and reasonable explanation that I can offer you is that which I have previously stated: that *certain predisposing conditions must exist*, and that it is thus that the susceptibility to the specific cause of the disease, that is, the bacillus tuberculosis, is constituted. With our present knowledge, it is impossible to assert definitely if the disease depends essentially on a *contagium vivum*, or, as I have previously quoted, in "the absence, not of the bacilli, but of that susceptibility due to the unknown concurrent conditions which constitute the tuberculous predisposition or diathesis." We must, likewise, candidly admit our inability to define positively whether a susceptibility does or does not exist in any given case, and whether that susceptibility is little or great; but it appears, nevertheless, equitable to assume that a susceptibility does exist whenever an impairment or deviation from our standard ideal of health can be established, and that our judgment as to the degree of susceptibility, little or great, should be dependent upon the extent of impairment or deviation from our standard ideal of health, as before stated.

Judging from the foregoing conclusions, it becomes most important in the treatment of pulmonary tuberculosis that we should not only take into consideration the many methods recently advocated, and such drugs as practical experience has established as beneficial, but that we should, likewise, direct our attention to the *foremost* and *unquestionable necessity* relating to its prevention.

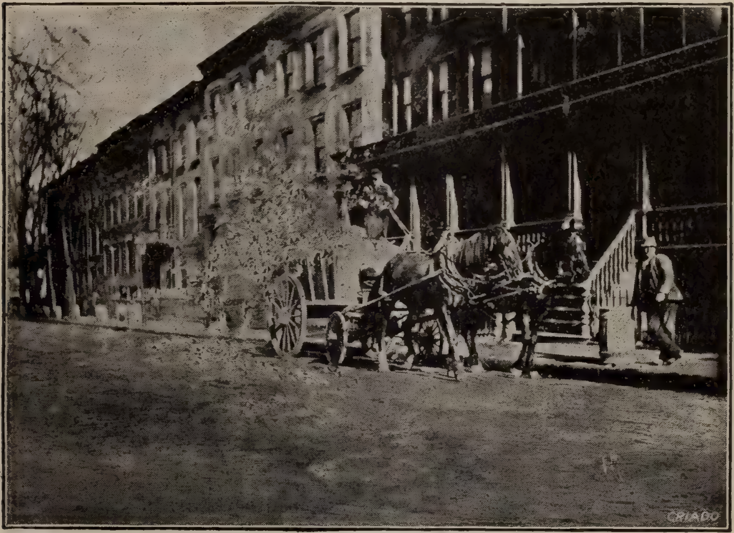
In view of the hereditary transmission of tuberculosis in an unfortunately large proportion of cases, it becomes indispensable that a preventive course of treatment should be instituted at the very earliest period of infancy. When tuberculosis exists in one of the parents, the mother should be forbidden to nurse her child. The urgency for such a restriction becomes not only imperative if the mother be the parent afflicted with the disease, but likewise, if notwithstanding her most excellent apparent health, her husband should prove to be the unfortunate. In the first instance the restriction becomes necessary for the most obvious reasons ; in the second, on account of the mother's constant and unavoidable association with her husband, and hence the danger of her contracting the disease and transmitting it to the child. Under such conditions a healthy nurse should be provided and the very same precautions exercised in order to avert a similar possibility. When collateral hereditary influence is alone to be feared, if the mother be healthy, she may be permitted to nurse her child ; but, if for some good reason she cannot, a nurse should be provided as before mentioned.

Children whose mother or father is tuberculous, should not be allowed to sleep in the room occupied by the afflicted parent, nor permitted to be kissed on the mouth ; the room in which they sleep should be properly ventilated, the best hygiene being commendable; they should have plenty of open air exercise, and, if possible, they should be brought up in the country ; their food should be wholesome, nutritious and abundant ; in fact, the most careful mode of living is advisable, and on the appearance of the most trifling indisposition or illness, a physician should be promptly consulted and his advice strictly complied with.

Marriages of consanguinity, between members of tuberculous families, and of persons afflicted with this disease, should be discouraged, and whenever possible, forbidden, in order to prevent its transmission congenitally ; "*whenever possible*," I said, for we must, at least, be considerate to nature's irresistible promptings, and hence the impossibility to enforce such an *otherwise* absolute rule.

It being apparent that certain diseases exert an influence favorable to the development of tuberculosis, it becomes our duty to warn the public as to the tending danger of an ordinary neglected cold, and likewise, as to the important necessity of the continuance of medical attendance until complete resolution may have been established and the ordinary health secured subsequent to attacks of bronchitis, pleurisy, pneumonia, whooping-cough, measles and other similarly predisposing diseases. I cannot too forcibly express my conviction as to the fact, that *if* the laity would abstain from the *pretentious ignorance* and *preposterous assumptions* to which they subject their own children, and that of others, in administering patented nostrums, consulting druggists, and assuming that the services of a physician are not necessary in cases of whooping-cough, bronchitis, measles and other diseases, that the susceptibility to tuberculosis and its great prevalence would be *materially modified*. Dr. Dobell says : "The highly educated narrow-minded conceit of the present day makes people think that they are bound to understand everything, however much it may be beyond their comprehension, and when they find themselves in a position which they cannot understand, instead of trusting to the authority of a wise and instructed counselor, who has devoted his life to the subject, they rush at the first chance of some simple formula or belief, some striking flag on which to pin their faith."

The inhalation of dust of various kinds, and particularly of that in which irritating, sharp particles are contained, should be avoided by persons subject to bronchitis, and by such others as might be judged susceptible to tuberculosis.

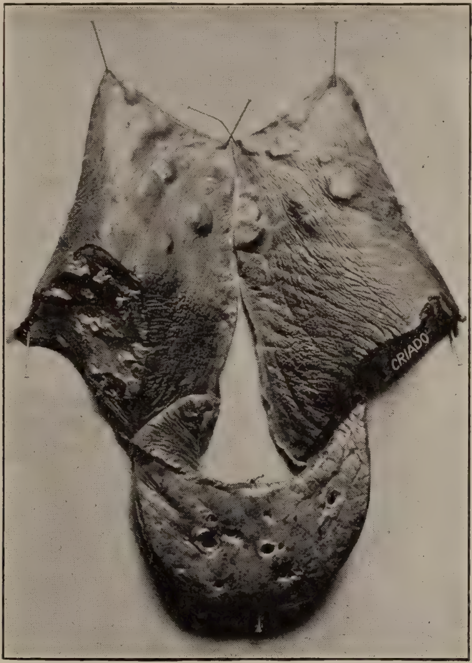


It is often contended that we are living in a progressive age; may it not then be admissible to question: is there no way *possible* by which we might respectfully convince our city authorities as to the inconsiderate and most outrageous existing discipline pertaining to the necessary removal of ashes and garbage from dwellings, and the *occasional* but most *indiscreet* time of the day chosen for cleaning our notably filthy thoroughfares? *Can we not,* jointly, awaken our city authorities and make evident to them the existence of the most absurd inconvenience, and the impending dangers to which the public is constantly exposed in inhaling an atmosphere densely charged *not only* with various irritating particles of dust, but likewise with offensiveness and a *numerous variety* of micro-organisms. Dr. Ransome states: "Workmen are now much more alive to the danger arising from it than they were formerly, when, as Dr. Hall, of Sheffield, tells us, the file-grinder looked upon early mortality from lung disease as inevitable, and rather welcomed it, as affording a chance of more speedy promotion."

It is necessary that we should become cognizant of the possible transmission of tuberculosis by the ingestion of the milk and flesh of animals affected with the disease known as the *pearly distemper*, the disease being, as I have before mentioned, the same as occurs amongst human beings, and in which two cases the very same kind of bacilli exist. In view of the fact that the bacilli have been detected in the milk of tuberculous cows when the udders were diseased and when not, it would seem justifiable to infer that this dangerous source of infection must be proportionately great, and that not alone might pulmonary tuberculosis be attributed to it, but likewise, certain intestinal and mesenteric diseases; for it must be borne in mind that in our large cities the consumer never knows the condition of the herd from which the milk is derived, nor whether it is a part of the collective mixture or directly obtained from a diseased animal. At the Congress on Tuberculosis held in Paris, in July, 1888, it was urged and a resolution passed to the effect that "all meat derived from tubercular animals, whatever the gravity of the specific lesions found in them, should be seized and totally destroyed." In most countries, however, if the beasts appear well nourished, the diseased parts are generally removed and the meat sold. I herewith take pleasure in presenting to you a number of specimens of diseased animal lungs (from the lamb) which I have secured from various butcher-shops in this city. It would seem most natural that the sale of the meat of tuberculous animals, and of the milk, cheese and butter supplied from them should be subjected to the most rigorous restrictions. The possibility of infection from these sources should be guarded against; the milk should be sterilized by thoroughly boiling it, and the meat well done when cooked.

In consideration of the universal distribution of tuberculosis; of the fact as claimed by Tappeiner and other investigators that pulmonary tuberculosis has been produced in animals by the direct inhalation of powdered tubercular sputa; that Cornet has demonstrated the presence of the bacilli in an active condition in the dust, such as is generally suspended in the atmosphere and the walls of dwellings; and that other investigators have detected it in the breaths of tuberculous individuals by condensation, it need but be mentioned that the opportunities for infection are most numerous, and due particularly to the sputa of consumptives containing the bacilli, which when expectorated upon the floor, carpets or elsewhere, become dry, and thus carried about by the air. Commonsense and good judgment dictate, therefore, the necessity of extreme cleanliness, thorough ventilation, and the careful collection and disinfection of the tuberculous sputa.

It has been proposed that persons afflicted with tuberculosis should be isolated by being confined in institutions especially dedicated for this purpose. In an article written by our lately demised friend, Dr. Kretzschmar, it is stated: "If the advocates of isolation would reflect for a short time and consider the hardship and injury which would follow its introduction, affecting as it would a large proportion of the human race and seriously interfering with our entire social life, without giving the slightest assurance of better results than those obtained after many years of trial in Naples and Portugal, one would hesitate to advocate so inhuman a proposition; and finally, what advantage would isolation have if carried out in the State of New York and not in New Jersey or Pennsylvania, or if adopted by the United States and not by Canada—the sooner the medical mind is directed in other channels



the better it will be." There is no doubt as to the necessity of such institutions, irrespective of nationality and religion, and free to the poor in want of proper lodging, care and accommodation; *but* I certainly must express my opposition to the proposed *outrageous* innovation relative to the compulsory isolation of unfortunates who can *certainly secure* superior medical attendance, accommodations, comforts and considerations at home; for we must disinterestedly admit that there is not in existence, and that it is doubtful if there ever will be an institution dedicated for such a purpose or any other, wherein patients are or might be as joyfully welcome as at home; and thus particularly, if the encouraging expectancy of a pecuniary interest does not exist.

Dr. Kretzschmar has very properly stated that: "The sooner the medical mind is directed in other channels the better it will be," and I would add that the sooner we make the public understand that the *medical profession is not* endowed with spiritualism, magic, miracles, or any special or occult power, belief, *or humbug*, but with *purely rational, scientific principles* attained by accumulative experience, incessant study and continuous practice, *the better it would be;* for unfortunately, our greatest obstacles to a course of preventive treatment are raised not alone by the patients themselves, but by their friends, in the *ignorant assumption* that we are "*making too much fuss*," notwithstanding the *significant* consideration of *a little obstinate progressive weakness* and *disturbance of temperature.* The public should be *much less imaginary* and *ignorantly conclusive;* they should, if possible, be made to conceive their *much inferior* professional qualifications, and thus grant us the privilege to impart to them our knowledge of the dangers of self or public infection existing:

1. In negligently swallowing or expelling their expectorations upon the most convenient place.

2. In the atmospheric condition of our crowded theatres, churches, tenement-houses, schools, and particularly of our street-cars, due to the continuous accumulation of expectorations and the vast number of bacilli thus necessarily disseminated.

3. In the absurd habit of kissing each other on the mouth, in compliance with the social requisite of mutual friendship, and particularly in kissing children without the least regard as to the indifferences or dislikes of parents.

In view of the numberless existing city and country boarding-houses, hotels and *fashionable "sanitariums"* of the present age, I will state that I regard them *as the most dangerous* source of infection, for the reason that it cannot be otherwise, notwithstanding the most frequent changes of bedclothes, thorough sweeping and ventilation. Let us assume that to a certain diseased individual a certain room has been assigned, and that at the end of a week or ten days he has died, or departed to another city or country boarding-house, hotel, or *sanitarium;* that, as does not ordinarily occur, the room occupied has been thoroughly ventilated, swept, and clean bedclothes substituted, and that on the arrival of another guest the same room is designated for occupancy. The supposition being logical, I would ask, is the present guest not being subjected to a most dangerous source of infection, in view of the fact that said first diseased guest exhaled numberless bacilli, expelled his bacilli-laden expectorations upon the carpets, rugs, and possibly on the walls of the room, and that having been subject to "night-sweats," had thus not only permeated the bedclothes (the blankets seldom being changed), but likewise the ticking of the pillows and mattresses? I herewith desire to call your attention to the fact that in Italy and Spain the disease is regarded so contagious that after death the bedding and other articles of furniture are totally destroyed, and the dwelling thoroughly fumigated and cleansed; likewise, to quote two of the conclusions drawn by Dr. Flick in his recent elaborate topographical study of phthisis:

1. "That a house which has had one case of consumption will probably have another within a few years, and may have a very large number of cases in close succession.

2. "That when a case of consumption occurs in a house, approximate houses are considerably exposed to contagion."

The essential and beneficial climatic conditions to this disease, are: dryness of atmosphere and soil, purity of air, low atmospheric pressure, high elevation, low temperature and stillness of air.

Heretofore, it was universally regarded necessary for consumptives to reside in a warm climate; at the present day, it is believed that a cold climate should be advised, such as the Swiss Alps, the Adirondack Mountains, etc., etc.; but in order to abridge the subject, I will state that I once did know of a case that was successively ordered to go from this city to Jacksonville, from thence to Havana, then across the Atlantic to Spain, and from Spain to Havana, where the unfortunate but hopeful traveler ultimately died; not without the further advice, however, of a contemplated journey to Colorado. Dr. Dobell states: "Happily the day has passed when it was believed that there must be a specific climatic cure for every disease. No professional or popular delusion has led to the sacrifice of more lives, or to more domestic disruptions, blasted hopes, and weary disappointed longings for that which, while impossible, was still believed to exist. In prescribing the exact form which the change in the surroundings and in the manner of living is to assume, we must always take into account the temperament and possibilities of the individual, and also any strong longings for this or for that, the indulgence of which may give the chief stimulus to restorative treatment."

In considering the treatment of pulmonary tuberculosis, it becomes quite unnecessary that I should venture into the numerous well-known methods with which we are fully acquainted, and amongst which we may mention in alphabetical order, the following: Actæa, alcohol, arsenic, atropia, benzoin, benzoic acid, belladonna, blisters, camphoric acid, chloral, carbolic acid, conium, cocaine, chloride of calcium, compressed air, chloroform, cod-liver oil, coto bark, creasote, croton-chloral, eucalyptus, gallic acid, gelsemium, glycerine, hot-air, hypophosphites of soda and lime, hydrofluoric acid, iodine, iodoform, iodide of potassium, ipecacuanha, mercury, nitrate of silver, opium, oxygen, ozone, open-air treatment, phosphate of lime, picrotoxine, pilocarpine, quinia, salicylic acid, sea-bathing, sponging, sulphuric acid, sulphurated hydrogen, strychnine, tellurate of potassium, turkish-baths, thymol, vinegar, etc., etc.

What most interests us at the present moment, are the treatments recently advocated for this most delusive and fatal disease, amongst which I will refer to Koch's, Shurley and Gibbes's, Lannelongue's, Nadaud's and Liebreich's; all of whose preparations I take pleasure in presenting to you.

The discovery by Koch of an agent which is supposed to antagonize the effects of the bacillus tuberculosis in the animal body, was made known in the year 1890. This agent is known as Koch's tuberculin, and claimed to be the product of the bacillus—a ptomaine formed by the action of the bacillus—extracted by a fifty per cent. solution from the culture soil in which the bacillus is grown. The remedy is a transparent, brown liquid, not liable to decomposition, but which when diluted for use, readily becomes turbid, unless the solution is boiled on every occasion requiring the opening of the bottle containing it, or a one-half per cent. solution of carbolic acid be added thereto. In order to give you the best description as to the use of Koch's tuberculin, I will quote from Dr. Whittaker, as follows: "The solution is best made by first preparing a ten-per cent. solution; that is, by adding to one cubic centimetre (16 minims) of the fluid, nine cubic centimetres ($2\frac{1}{2}$ drachms) distilled water, or one-half per cent. carbolic acid solution. From this ten-per cent. solution a one per cent. solution is made in the same way. Since the weak dilutions lose potency by long keeping, the dilution should be made fresh as often as possible. The fluid is introduced by subcutaneous injections between the shoulders or in the loins, and best by Koch's syringe of one cubic centimetre (16 minims) contents and $^1/_{10}$ cubic centimetre ($1^1/_2$ minims) scale. The syringe is sterilized in barrel and needle with absolute alcohol, whereby abscess formation is avoided absolutely. Ordinary syringes, if used, must be sterilized in the same way, though the avoidance of abscess is not so sure with this instrument. Injections should be made early in the morning, that the subsequent elevation of temperature, which occurs only after the lapse of several hours, may be observed on the same day. Consumptives should receive at first 0.001 or 0.002 cubic centimetre ($^1/_{60}$ grain or $^1/_{30}$ minim), that is, one or two injections of the one per cent. solution; the dose is then to be cautiously increased. In case of fever over 38.5° C. (101.4° F.), the same dose is to be repeated or omitted; with no or but little fever, the dose should be increased 0.001 or 0.002 cubic centimetre ($^2/_{125}$ or $^4/_{125}$ minim). When the increase has reached 0.01 cubic centimetre ($^1/_6$ minim), it may be increased, under vigilance of temperature, to 0.01 or 0.02 cubic centimetre ($^1/_6$ or $^1/_3$ minim). When the daily dose has reached 0.1 cubic centimetre ($1^1/_2$ minims), it need not, as a rule, be raised. It is only in exceptional cases that it may be increased to 0.1 cubic centimetre ($3^1/_4$ minims) or more. The injections may then be continued with interruptions of one or two days, until all symptoms shall have disappeared. In lupus, not too extensive, the dose for an adult may begin at 0.01 cubic centimetre ($^1/_6$ minim), and be repeated as necessary. The same dose may be used in bone, joint, and gland tuberculosis." The symptoms consecutive to the injections are generally evident within four to six hours, and may be concisely described, as follows: Fatigue, at times intense; embarrassed respiration, pain in the limbs, cough, nausea, vomiting, rise of temperature, and not infrequently congestion and hæmoptysis. It should be borne in mind that in administering this most active agent, the greatest care should be exercised in all the necessary details; likewise, that it should never be employed unless it be in the *so-called* first stage of pulmonary tuberculosis. My own personal experience with this once promising remedy, prompts me to admit that I very much doubt its efficacy in pulmonary tuberculosis, notwithstanding that it may prove of comparative utility in cases of lupus. Dr. Koch has recently excited much interest in his communication to the "Deutsche Medicinische Wochenschrift," in which he gives the results of experiments to obtain the active principle of tuberculin in a purer form. Absolute alcohol in small proportions was tried and a white precipitate obtained, which after drying at a temperature of 100 C. (212° F.) appeared, when powdered, of a light gray color, fairly soluble in water, but which when thus dissolved, would within the period of two weeks lose some of its activity, notwithstanding that a fifty per cent. solution in glycerine appeared to be stable. The conclusion arrived at after a number of experiments on guinea-pigs and human patients, is that the purified tuberculin does not differ in the nature of its action from the crude tuberculin.

The next curative method lately suggested, is that of Gibbes and Shurley: "On the value of the inhalation of chlorine gas and the use of iodine and chloride of gold and sodium hypodermically." As directed, the inhalation of chlorine gas should be conducted in a small room by spreading in a saucer or small pan from one to three drachms of dilute hydrochloric acid, and thoroughly mixing the two ingredients with a wooden spoon or the equivalent. Previous to and during the evolution of the chlorine gas, the atmosphere of the room should be kept charged with a saturated solution of sodium chloride by means of an atomizer, and the patient directed to breathe through the nose in order to obviate the propensity to an irritative cough. The quantity of gas evolved from the use of one-half drachm of chlorinated lime should be generally considered sufficient to begin with, and the inhalation should not be continued beyond two minutes; but on subsequent treatments, not only should the quantity of chlorinated lime be increased, but likewise the time during which the chlorine gas evolved should be inhaled. In mild cases of pulmonary or laryngeal tuberculosis (the United States Pharmacopœia), chlorine water mixed with a saturated solution of salt in the proportion of one-half, one-third, or one-fourth is recommended, and from one-half to two ounces of the mixed solution directed to be vaporized and inhaled on each occasion. The inhalations by either method should be practiced from one to three times per day. In reference to the hypodermic injections, it is thought advisable to begin with the administration of $^1/_{12}$ grain of the iodine solution, gradually increased to $^1/_2$, and in some cases to one grain. The injections of gold and sodium solutions should then be pursued, beginning with $^1/_{30}$ or $^1/_{20}$ grain, gradually increased to $^1/_5$ or $^1/_8$ grain, at which period the injections (in proportionately small doses) of the iodine and the gold and sodium solutions should be alternated; one day using the iodine solution, and the next the gold and sodium. The symptoms accompanying this method of treatment are increased temperature, cough, excessive perspiration, lessened expectoration, diarrhœa, anorexia, the throat becoming dry, and the patient listless; but a tonic effect is claimed to follow the injections of the gold and sodium solutions, notwithstanding the occasional appearance of some nausea and vertigo. In reference to the results obtained by this method, it is stated: "While our experience is too limited to determine accurately its real value compared to other plans of treatment, still its use, more or less, for about eight months on human beings, has given us some *data* which may prove interesting," etc., etc.

In the editorial comment of "The Lancet" of July 18, 1891, on the use of the chloride of zinc, it appears that "the treatment of tubercular diseases brought under the notice of the Paris Academy by M. Lannelongue, is essentially based on the simple fact that fibrous induration is to be regarded as the natural curative process of tubercular change. It having been found that chloride of zinc is peculiarly apt to excite such sclerotic processes, when administered in sufficiently small quantity (two or three drops of a ten per cent. solution) so as to obviate its more powerful escharotic action, this substance has been employed, and has yielded very satisfactory results in external tuberculosis, and its application in the case of pulmonary tubercle is, according to M. Lannelongue, equally encouraging. As an illustration of the changes effected by injections of this salt into tubercular tissues may be cited the case of a child suffering from caseous glands, many of which had become fused into one mass. These were treated by the injections, and after a few days, suppuration commencing, the glands were extirpated. Opportunity was thus afforded for comparing histologically those glands which had been injected and those which had been left alone. In each case there was caseous material surrounded by a zone of tubercular tissue within a fibrous sheath; but in the former glands the whole substance was dense and fibrous, and very firmly adherent to the investing layer. It would appear that the tubercular formation itself is less influenced by the agent (which has no specific property, and is, therefore, not in the least comparable to Professor Koch's tuberculin) than are the healthy tissues that surround the tubercles. The aim of M. Lannelongue's method is, then, to induce the formation of a densely fibrous investment to active tubercle, and by this process of encapsulation to limit the diseased product, and as it were to imprison the bacilli.

"That chloride of zinc does possess the property claimed for it, is sufficiently proved by the experimental study conducted by M. Lannelongue, in conjunction with M. Achard; but the adoption of his treatment will depend upon the confirmation of his results at the hands of others. M. Lannelongue gives notes of two cases of commencing pulmonary tuberculosis, both in children, in which a single injection of two drops of a one in forty solution was made into the apex of the affected lung (through the second intercostal space). In each case râles, previously present, disappeared after the injection, and in one case the temperature remained normal, in the other it rose slightly on the fourth and fifth days ; but these cases are by no means conclusive, and it is impossible to base any definite opinion upon them. Indeed, on the whole subject of the curative effect of the method, M. Lannelongue speaks with commendable reserve."

In the New York "Medical Journal" of October 31, 1891, it is stated that in the month previous Herard read before the Paris Academy of Medicine a report by Nadaud, in reference to the value of hypodermic injections of aristol in pulmonary tuberculosis :

"After having observed the excellent effects of aristol on scrofulo-tuberculous lesions, and found that aristol was perfectly innocuous in internal medication, M. Nadaud decided to make use of hypodermic injections formulated as follows :

Oil of sweet almonds (sterilized).	100 c.cm. ;
Aristol......	1 c.cm.

The solution should be filtered.

"Nadaud's first injections were made upon a child aged seven years, who, after an attack of coxalgia, had several abscesses followed by fistulous tracts. One cubic centimetre of aristol was injected daily. After twenty-five days of treatment there was no trace of suppuration to be seen. In consequence of this result, Dr. Nadaud decided to test the value of hypodermic injections of aristol in the treatment of pulmonary tuberculosis. Twenty-three patients suffering from tuberculous lesions of the lungs were successively treated by injections of aristol without any other medication whatever. In seven cases the amelioration was so great as to induce the belief that complete cures had been effected. The treatment covered from twenty-five to thirty days. The amelioration has continued up to the time of writing—*i. e.*, from three to four months. In five of the twenty-three cases there was a prompt amelioration, but in a month after the cessation of the treatment some symptoms were observed which seemed to call for a second series of injections. Generally the relapse was of slight importance, and the patients in this category soon resumed their habitual occupations. In no case was it necessary to make a third series of injections. The rest of the cases are still under aristol treatment. In concluding his paper Dr. Nadaud said: 'The effects of aristola re promptly observed, usually on the sixth or seventh day of medication, and are first manifested by a diminution of the cough and a suppression of night-sweats. After twenty or twenty-five days of treatment we generally find that the patient has increased in weight. Aristol gives its best results in the first and second stages of pulmonary tuberculosis. The injections do not cause inflammation, irritation, abscess, eschar, or induration.'"

In a paper read before the Berlin Medical Society, held February 25, 1891, Dr. Liebreich claims as valuable the cantharidinate of potassium in the treatment of tuberculosis, especially when located in the larynx. I quote from "The Therapeutic Gazette" as follows: "Professor Liebreich states that although he did not wish to lay stress upon the benefit observed in cases of tubercular laryngitis, he had, nevertheless, seen marked improvement follow after the second injection, and that in no case, provided the kidneys were healthy, was there any untoward effect. Professor Liebreich calls attention to the fact that the salts of catharidinic acid now on the market are not sufficiently constant in their composition to be relied upon—his formulæ, therefore, as published in 'The Therapeutic Monatshefte' for March, 1891, is to weigh out three grains of pure cantharidin, six grains of potassium hydrate, dissolving in 320 minims of water (20 cc.), heating the solution for a long time in a water-bath, and then add enough water to make a litre. If caustic soda is desired, two parts of cantharidin must be heated with three parts of caustic soda in the same manner, and dissolved in the same way. The dose injected varied from $^1/_{600}$ to $^1/_{500}$ grain. In a few instances headache and giddiness were complained of after the injections; occasionally there was slight diarrhœa. In some cases slight scalding was noticed on micturition. In all cases where this remedy was tested or treatment suspended, and in the majority of cases, the claim is made that, after three or four injections, the voice improved steadily, until hoarseness almost disappeared. The patients felt much better, the physical signs in the chest improved, expectoration became smaller in quantity, more mucous and less frequent, cough subsided, night-sweats diminished, and in one case headache and fever disappeared after the fourth injection."

In conclusion, I will state:

1. That we can justly infer that the investigations of Dr. Koch and others have unquestionably extended our knowledge of the diagnosis, pathology, ætiology and prognosis of tuberculosis, but that the treatment must now, as heretofore, be mainly dependent

upon the removal of the concurrent conditions necessary for the growth and multiplication of the causative agent of the disease.

2. That for the present, in all cases of tuberculosis, our individual experience and judgment should alone serve to determine the most advantageous and promising adaptation of remedies, hygiene, diet and climatic conditions conducive to the welfare of our patients.

3. That an early diagnosis of the possible existence of pulmonary tuberculosis should be judged a most important requisite, and hence that microscopic examinations of the sputa of suspicious cases should be invariably undertaken for the most obvious reasons.

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REPORT OF TWO CASES OF CARCINOMA OF THE BLADDER.

BY H. W. RAND, M D.,

Surgeon to the Long Island College and St. John's Hospitals.

Read before the Brooklyn Surgical Society, March 17, 1892.

The comparative infrequency of this disease induces me to report the two following cases. The first was a male, seventy-six years of age, who was referred to me by Dr. A. J. C. Skene. As nearly as the patient could remember, his bladder trouble dated from the first of June, four and a half months prior to his coming under my care. His previous history was good. His first symptoms were increased frequency of urination, and pain sometimes before, and sometimes at the end of the act. These were partially relieved by rest and medication.

July 7th, the same symptoms recurred with greater severity, and on the twelfth he was obliged to take to his bed, where he remained for five weeks. During this period pain was severe, urination occurred hourly, and sometimes oftener. The urine was offensive, thick, and occasionally contained blood; and he lost rapidly in flesh and strength.

August 17th, he came under the care of Dr. Bloss, of Troy, to whom I am indebted for the following urinalysis: Albumen in small quantity, pus, blood, epithelium, and tough ropy mucous. Under irrigation of the bladder his symptoms improved until October 8th, when he again had a relapse. During these latter weeks he often passed offensive gas from the bladder, which was thought to be due to decomposition within that viscus. This imperfect early history of the case is due to the fact that I was obliged to depend mainly upon the statements of the patient and his relatives.

When he came under my care October 19, he was markedly cachectic, and complained of pain over the bladder and sacrum, extending at times down the thighs. Examination per rectum showed moderate lateral enlargement of the prostate, and some induration in the neighborhood of the left seminal vesicle. The urine was of fæcal odor, sp. gr. 1010, contained pus, blood, bladder epithelium, a small amount of albumen after filtration, and a quantity of extraneous matter, evidently fæcal. When clear it was usually acid in reaction. The patient urinates hourly and generally expels some foul gas at the end of the act. He has noticed that the pain is largely determined by the amount of gas, and that when this is present, the urine is also more foul, and contains more dark grumous matter. No history of urine, blood, or pus having been passed per rectum. The urine expelled during the night while the patient is in the recumbent position is comparatively clear, and not decidedly offensive, while that passed on rising and before, during, and immediately after defecation is dark in color, and of markedly fæcal odor. Examination with Thompson's searcher reveals moderate median hypertrophy of the prostate, and some hypertrophy of the detrusor muscle, but nothing further, except a very sensitive bladder. Some bleeding followed, although the operation was done with the utmost gentleness.

Several specimens of the urine were examined for me by Dr. Arnold Stub, who reported as follows: Alkaline, sp. gr. 1010; albumen in small quantity, the addition of ether causes the urine to become clearer, showing that it contains fat. Microscopical examination shows a few red blood and a few pus cells, striped muscle-fibre, connective tissue shreds, epithelia from the middle and deeper layers of the bladder, the former undergoing fatty degeneration, a very few mucous and hyaline casts, crystals of oxalate of lime and uric acid, oil globules, amylum and other vegetable cells, indicating fæcal matter. A rectal injection of a weak solution of methyl blue, at Dr. Stub's suggestion, shows clearly in the urine voided during the next few hours.

Daily irrigation of the bladder with either solutions of boric acid or borax, and the occasional injection of an emulsion of iodoform, with small quantities of belladonna per rectum, reduced the pain, and increased the intervals between the acts of urination to two and sometimes two and a half hours. The bladder was now holding five and sometimes six ounces, and there was no residual urine. During the first two weeks in November there was at times considerable hæmaturia.

November 14th, I made a cystoscopic examination after injecting ʒiij of a ten per cent. solution of cocaine, a previous attempt, after the use of half that quantity of cocaine, having failed on account of the pain produced. The right ureteral orifice was easily brought into view, the left could not be found, but was evidently involved in an irregular tumor, which was seen occupying the left angle of the trigone. This mass apparently at no point projected into the cavity of the bladder for more than a half inch. It presented, near its centre, an ulceration having a ragged edge, and an uneven floor. The mucous membrane of the bladder, except in the immediate vicinity of the growth appeared normal. Aside from a moderate increase of pain for the rest of the day, no ill effects followed the examination. The patient's condition remained about the same until November 27th, when he was seized with violent pain in the abdomen attended with vomiting. An enema was given by his attendant which was followed by a copious movement. When seen some four hours later his abdomen was tympanitic, and slight pressure greatly increased the pain, especially when made over the bladder and left side. Temperature, 101°; pulse, 100; urine diminished in quantity, turbid, and of very fæcal odor. For several days prior to this attack the urine had been fairly clear and with very little odor. The pain was so severe as to call for frequent hypodermic injections of morphia. The distention of the abdomen rapidly increased. A copious fluid dejection was followed by the expulsion of about half an ounce of similar matter from the bladder. At 9 P.M., no fluid of any kind having been passed from the bladder for five hours, I introduced a catheter, but evacuated only a couple of drams of thin fæcal matter. He died twenty-six hours after the occurrence of pain in the abdomen. There was some twitching of the extremities defore death, but no pronounced convulsion.

From the history of this patient, the presence of vesico-rectal fistula resulting from ulceration, the cystoscopic appearance of the tumor, the well marked cachexia, and the rapid termination in the manner described, I think there can be no question, even in the absence of a post-mortem, but that it was a case of primary carcinoma of the bladder and that the immediate causes of death were perforation into the peritoneal cavity from the bladder or rectum, septic peritonitis, and suppression of urine. The possibility of its tubercular origin was suggested, but the absence of tubercular deposits elsewhere, the age of the patient, the absence of the very frequent and painful urination so generally present in cases of such disease of the bladder would exclude this form of ulceration. Although several microscopical examinations of the urine failed to demonstrate the presence of cancer cells, we all know how unreliable is this negative evidence in either carcinoma of the bladder or kidney. In a case of extensive encephaloid carcinoma of the bladder which I reported here four years ago, such cells were not found after repeated examinations of the urine by an expert microscopist. Suprapubic cystotomy and removal of a portion of the tumor confirmed the diagnosis that had been based upon the clinical history and physical examination.

Case II was a male, aged forty-seven, who was referred to me by Dr. F. E. West. This patient had been suffering from symptoms of cystitis for eighteen months. Previous to that time his health had been good. No history of venereal or tubercular disease. His symptoms had steadily become more and more aggravated.

Urination was now very frequent, sometimes every twenty to thirty minutes, and attended with pain which was often severe, during, as well as at the close of the act. For the previous six or eight months his urine had been foul, purulent, and at times contained blood; and he had lost rapidly in flesh. There was no enlargement of the prostate appreciable on rectal examination. Exploration with the searcher showed an exceedingly sensitive deep urethra and bladder. The latter was contracted, its mucous membrane bled readily, and its capacity under cocaine was only two ounces, thus rendering cystoscopic examination impossible.

Dr. Van Cott kindly examined several specimens of urine for me, and reported that there was no evidence of kidney lesion, but that compound epithelium was present, together with blood and an abundance of pus, and believed the evidence in favor of malignant disease of the bladder.

October 10, at Long Island College Hospital, I did a suprapubic cystotomy upon this patient. The peritonæum was adherent to the bladder. The bladder wall was greatly thickened, unusually vascular, and so friable that in the effort to separate the edges of the incision, so as to obtain a view of the interior, it tore instead of stretching, the rent extending through the adherent peritonæum and exposing a loop of intestine. The peritoneal cavity was closed with a continuous suture, and no unpleasant result followed the accident. The only distinct growth found within the bladder was a small nodule about the size of a large pea on the right side of the trigone. The entire mucous membrane was thickened, softened, and very vascular, and felt and looked like granulation tissue. No distinct points of ulceration could be seen. On palpation the wall of the bladder appeared to be about equally infiltrated in all directions except at its neck, where there was more induration and a somewhat nodular condition. The median portion of the prostate was not enlarged.

The upper third of the abdominal wound was closed, and a large rubber tube threaded with iodoform lamp-wick, and sufficiently long to pass from the bladder to a vessel by the side of the bed, was introduced for syphon drainage. A packing of gauze around the tube was necessary to arrest the oozing from the incision in the bladder. Dr. Van Cott made a microscopical examination of the small growth that was removed, and reported it to be a medullary carcinoma.

The patient's symptoms were very materially relieved after operation. The highest temperature noted was $99\frac{1}{2}°$. The bladder was irrigated several times daily, and he was at first kept fairly dry. At the end of two weeks the patient, who even prior to operation, had seemed erratic—probably the result of his long-continued suffering,—began to show symptoms of acute mania, which soon became well marked. This rendered the subsequent care of the case difficult; but after three weeks he became so far rational that he was sent to his home. After his return home, I learn from Dr. D. M. Wilcox who saw him occasionally, that he had several brief attacks of mania; that at times he had considerable pain, though much less than before operation; that the wound remained patent, and that neither the pelvic nor inguinal glands became appreciably involved. From another source I learn that he had several hæmorrhages from the bladder during the last month of his life. He died in January, about three months after operation, apparently from renal complications.

Where surgical aid is required in cancer of the bladder, the particular operation that is indicated must be determined upon the merits of each case. The removal of the growth, with that portion of the bladder subjacent to it, as has been done in a few instances must be applicable to only a very small proportion. In those that have come under my observation, partial excision, or palliative measures alone were all that could be deemed advisable.

In the first case here reported the only operative interference that seemed at any time indicated was a median cystotomy for continuous drainage; but the chief symptoms calling for such drainage, viz., the frequent and painful urination, would so far respond to constitutional and local palliative measures that even this seemed unadvisable. I say a median cystotomy because the neck of the bladder being uninvolved perineal drainage, had any operation been necessary, would have been more complete than suprapubic, and consequently better for this patient. The rapidity with which the former operation could have been done, and the tolerance of the deep urethra would also have been arguments in its favor in this particular case.

A cystotomy, either supra or infrapubic, could not if our diagnosis was correct, have brought about closure of the fistula, although it might in a measure have prevented the aggravation of symptoms which occurred at times from the presence of fæcal matter within the bladder. But a cystotomy even for drainage would have added another element of discomfort without proportionate relief; and I believe that any attempt at removal of the growth in this patient, even had he not been the subject of serious cardiac lesions, would have been disastrous.

The second case was one of those rare forms of carcinoma in which the disease began, and remained for some months as an infiltration of the entire bladder, without forming any considerable tumor within its cavity, and without undergoing ulceration. The history of hæmorrhages later in the course of the disease would, however, indicate that ulceration finally occurred. When this patient came under my care he had a contracted and intolerant bladder, which bled upon the slightest manipulation. From his history the bladder, perhaps, contained a removable tumor. Without a cystotomy this could not be decided; for cystoscopic examination was impossible. There was also very frequent and painful micturition calling for relief, probably by permanent drainage; and such drainage could not well be established through the perinæum on account of an exceedingly irritable urethra, the presence of a catheter in the deep urethra giving severe pain. In such a case as this, and in similar ones, I believe that a suprapubic cystotomy promises the best results in an operative way, and the most comfort to the patient if permanent drainage is to be established.

DISCUSSION.

Dr. Fowler:—The subject of malignant disease of the bladder is to me an exceedingly interesting one. I can conceive of no class of cases in which a more absolutely hopeless outlook exists than in cases of this character. I have been somewhat interested in the subject, because of the difficulty in making a positive diagnosis in these cases. There is always difficulty in arriving at a definite conclusion based upon any examination of the urine, as Dr. Rand has stated. Whether this is because of certain qualities of the urine, or from some other reason, I am not able to say, but in seven or eight cases that have come under my observation in which I was led to suspect carcinoma of the bladder, prior to operation, I was absolutely unable to obtain any information from microscopic examination of the deposit in the urine. The difficulties in the way of cystoscopic examination are also great. These cases do not come under our care until they are fairly well advanced, and then the cystoscopic examination is so painful as to make it a very unsatisfactory medium through which to search for evidences of the diseased condition of the bladder wall.

I think it has occurred to me four times within the last two years to open the bladder for suspected stone, and then discover the presence of carcinoma. Having obtained all the evidences of stone in the bladder from the characteristic sound and sensation conveyed to the touch through the medium of the searcher, I have been surprised to find malignant disease present, together with a considerable amount of phosphatic material imbedded in the growth. These cases have perished, as in fact have all the cases of carcinoma of the bladder that I have ever seen. The early history of the cases, even though we are able to obtain a fairly perfect history, does not as a rule assist us very greatly in coming to a conclusion as to the conditions present. The occurrence of hæmorrhage, of course, is always a matter of suspicion, but in the cases mentioned in which I have opened the bladder expecting to find only calculus, there was no history of hæmaturia. All these were hospital patients, and a more or less careful watch was kept, and examination made upon several occasions prior to the decision to resort to operative measures.

The occurrence of fæcal communication always awakens the inquiry in my mind as to whether the disease began in the bladder wall itself, or in adjoining intestine. I am very sure that in a case I saw in consultation with Dr. McCorkle and Dr. Byrne of this city, it was pretty clearly demonstrated that the growth began upon the peritoneal side of the bladder, or possibly in the wall of the intestine itself. In that case intestinal involvements became a marked feature of the case before the death of the patient, though all symptoms were present of carcinoma of the bladder. The case terminated almost precisely in the same way as that of Dr. Rand. An autopsy was not obtained, but it was evident that the disease did not begin in the bladder.

In one of the cases in which I opened the bladder with the expectation of finding calculus present, the disease had sprung from a point just posteriorly to the prostate, which was enlarged, and seemed to involve the middle lobe, and yet examination by the rectum did not disclose anything especially noticeable about the prostate itself, other than the enlargement.

I remember having operated upon a case a number of years ago, and removed through the perinæum by means of Thompson's bladder tumor forceps, a large sarcomatous mass from the interior of the bladder. The patient lived nearly eight months afterwards, and about six months after the first operation all the original symptoms returned, and a suprapubic cystotomy was performed. At the first operation a mass was removed which altogether was as large as the two fists. Upon the second operation a yet larger mass was removed through the suprapubic opening. This patient died before the suprapubic wound was entirely closed, and I am fain to believe that his discomfort was rather increased than lessened by the performance of the suprapubic operation. The difficulties in keeping up drainage without keeping the patient constantly wet, are very considerable. At that time no method better than that of the ordinary T-shaped, Trendelenburg tube was available. In subsequent operations, where it was necessary to maintain the suprapubic opening, I have resorted to the method of capillary drainage, and have found it to be quite sufficient.

I am led to believe, if a patient's case is absolutely hopeless, and if the object of the operation is simply palliative, as almost all operative measures necessarily are in these cases, that the opening into the perinæum, even if it must pass through tissues more or less diseased, is preferable to the suprapubic operation. This class of cases are among patients more or less difficult to manage, they must necessarily retain a recumbent position for the balance of their lives. Under these circumstances drainage through the suprapubic opening is attended with more or less difficulty in keeping the patient in a clean and comfortable condition.

Dr. Rand :—I have nothing to add except in reference to the difficulty of distinguishing between carcinoma of the intestine secondarily involving the bladder, and primary carcinoma of the bladder. In this case there was no blood or pus discharged from the bowels. He had no pain on defecation, and his movements were perfectly formed. These facts taken in connection with the appearance of the tumor within the bladder, convinced me that in this case the disease originated in the bladder wall and not in the intestine.

Case of Lymphangioma of Groin.

Dr. Pilcher described a small cystic tumor, the history of the specimen being as follows:

A babe some seven months of age, was brought to him with the supposition that it was suffering from strangulated hernia; some two days or more before it had, while crying, appeared to be suddenly in intense pain, and the evidences of shock which it presented at the time were described by the parents as being well marked. Immediately afterwards a swelling was noticed in the groin, which swelling had apparently disappeared somewhat, and had again appeared and had persisted, and since its appearance and persistence there had been no movement of the bowels, so that the physician to whom it had been carried had much reason for thinking that a hernia had taken place, which at least was irreducible, and that further efforts should be made for its reduction. When brought to Dr. Pilcher, there was evident at the site of the internal ring an elastic mass, which was somewhat movable, but not any more so than an hernia sac might readily be. This was not reducible by any method that could prudently be applied, and yet the child presented no evidence of special suffering, and the part was not particularly tender. As any child would, when pressure was made much upon it, it would cry as the result of the pressure, but there was no very great tenderness present. The history of the case and the symptoms which it presented, while by no means certainly indicating the presence of an hernia, was yet enough to make one feel that possibly there was an hernia which was for some reason present here, and that in any event it would be a prudent thing to expose it and establish a diagnosis, and relieve the condition whatever it might be. It was therefore exposed by the usual method, as if it was an hernia sac. Upon cutting down through the superficial facia a glistening sac was brought to view, which upon furthering exposure gradually enucleated itself, until finally there came away a complete sac filled with fluid, being about the size of a large pigeon's egg. This sac filled with lymph Dr. Pilcher considers to be an occluded and dilated lymphatic trunk, the case being one of those cases of inguinal lymphangioma which are often confounded with hernia.

If this is a fair specimen, it is undeniable that they do present many symptoms like hernia. In this particular case the symptoms preceding the discovery of the tumor were such as to give special prominence to such a supposition; the pain, the shock, all were such as gave a probability to the diagnosis of an hernia being present. The fact of its never having been noticed before, and now being noticed and having this size already, was also another symptom. Dr. Pilcher expressed the wish that if such a condition had been met with by others of the society, their experience might be added to this which he had been able to present.

DISCUSSION.

Dr. Fowler :—I can easily understand from the history as presented to the doctor when this patient was brought to him, why this might have been believed to be an irreducible, but not strangulated hernia. I cannot understand, however, how the part of the history in which it is stated that it first disappeared and then reappeared, would fit the conditions which the doctor found upon making the dissection. In all probability this part of the history, although supporting the view that it was an irreducible hernia, and thereby justifying the incision, was unreliable.

A BROKEN TRACHEOTOMY-TUBE LODGED AT THE BIFURCATION OF THE TRACHEA.

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Read before the Brooklyn Surgical Society, March 17, 1892.

On May 25, 1891, I was summoned to Northport, Long Island, to a case of suicidal cut-throat, by a telegram from Dr. H. H. Davidson, of that place. Upon my arrival I found J. L., aged thirty-two, who three days previously, in a fit of despondency, following an attack of alcoholism, had by means of a razor severed the larynx and anterior œsophageal wall. The razor had sliced off the upper margins of the thyroid cartilages, both superior cornuæ and severed the thyro-epiglottic and hyo-epiglottic ligaments. Fortunately the work had been done principally by the end of the instrument which had been tilted in such a manner as to pass between the sterno-mastoid muscles, hence the large vessels of the neck had escaped.

An attempt had been made by another practitioner to close the wound by means of catgut, but this soon gave way and left the wound gaping as at first. I at once performed tracheotomy, introduced a stomach-tube, gave the half-starved patient a pint of milk through the latter, and packed the wound with zinc-oxide gauze.

The next day he was admitted to the Methodist Episcopal Hospital where the wound slowly granulated, until a small opening only was left. This was at the site of the glottic opening in the larynx. It was found that the function of the epiglottis was entirely lost, and that the posterior wall of the œsophagus bulged forward in such a manner, when attempts at swallowing were made as to guide the food forward into the larynx. This made it necessary for him to wear the tracheotomy-tube permanently, and consequently it was transferred from the lower opening to that at the level of the glottis, thus permitting the closure of the former.

He left the hospital October 27, 1891, and returned to his work as a farm-hand. On Monday last (March 14) I received a telegram from his employer stating that the tube had broken while the patient was attempting to clean it *in situ*, and that a portion of it remained behind. The patient was admitted to the hospital where an attempt was made by my house-surgeon to extract the tube, which failed. I saw him in the afternoon and, by means of the telephone-probe, readily located the upper limit of the tube as lying at four inches and a half from the level of the opening in the glottis. With the length of the tube added to this measurement I judged that the lower extremity of the latter rested at the orifice of the left primary bronchus.

The respiratory sounds upon the left side were rather less pronounced than upon the right, and some mucous râles were heard just to the left of the sternum. There were no differences discoverable in the percussion note of the two sides. There was very slight irritation produced by the presence of the foreign body and no apparent difficulty in the respiratory efforts.

On the following day there was observed a somewhat greater difference in the respiratory sounds, but the introduction of the telephone-probe showed the tube to be in the same position. A low tracheotomy was then performed, and after one or two attempts the tube was grasped by means of a pair of strong forceps and withdrawn. As it was brought out of the tracheal opening it was observed that its direction was such as to indicate that its point had been turned to the left.

A slight bleeding followed the withdrawal, due to the fact that the thin and ragged upper extremity of the tube had scratched the tracheal wall in its passage.

The patient rallied well from the operation and apparently suffered no inconvenience from his misadventure.

The portion removed consisted of the tube portion of the instrument, which had parted from the shield, the solder used having been attacked by the secretions.

The case suggests the dangers to which patients are subjected who are compelled to wear a tube permanently by any defect in the latter. In order to avoid this risk it behooves the surgeon to select for his patient's use a form of tube much in vogue in Germany, in which the construction is such as to render this accident almost impossible. The instrument referred to is rendered secure by having the tube portion attached to the shield by being "spun" over the latter and rivetted, thus doing away with solder altogether. The latter when employed for such a purpose must necessarily be composed of an alloy of silver which melts at a somewhat lower temperature than the material from which the tube and shield are made, and will not resist the action of the secretions in the same manner as the pure metal.

THE UTILITY OF CUPPING IN AN OBSTINATE CASE OF PERSISTENT HICCOUGH.

BY T. LOUIS FOGARTY, M.D.

G. McH., male, aged twenty-one years, native of Brooklyn, was taken suddenly ill in church, February 24 last; had a severe chill which lasted about five minutes. This was repeated in about an hour. On going home he retired, after taking a hot mustard foot-bath and drinking a hot toddy. The chill lasted about an hour this time. A physician was summoned, pending whose arrival the hiccoughing began, and continued incessantly, in spite of the physician's exertions. On the evening of Wednesday, the 27th of February, I was called to attend the case. The hiccoughs (three days and nights in duration) had left the patient, naturally anæmic, very weak; temperature then 104°; pulse, 140 per minute; respiration, short and jerky; dulness on percussion over base of left lung. The patient was in a semi-conscious condition, delirious, picking at the bedclothes, and crouched low down in the bed. A rash, resembling that caused by antipyrine, all over the face and body; marked tympanitic distension of bowels, no passage therefrom in two days. I prescribed one-fifth grain doses of morphia in aqua menth. pip., and aromatic ammonia. After the first dose the distressing complaint stopped, but began again in thirty minutes. Another dose of morphia was given then, as before, stopping the hiccoughs only to have them come on again at intervals of thirty minutes throughout the night. He slept by snatches through the night, as I pushed the morphia. The following morning he was given 1-100 grain nitro-glycerine tablets, one every six hours through the day. This seemed to check the hiccough somewhat, but to no satisfactory extent. I tried nitrite of amyl to relieve the spasm, also made strong pressure on the phrenic nerve at the shoulder-blade—both much vaunted remedies for hiccough,—but with no result. On the evening of the 28th of February, I suggested the advisability of a consultation with Prof. Frank E. West, M.D., who met me at the case at 8.30 P.M. He confirmed my diagnosis and sustained my treatment. I resorted to cupping over the region of the diaphragm; which I continued to apply at intervals of two hours at first, subsequently at intervals of three hours, with wonderful effect. They stopped the hiccoughs. I had to put on about sixty cups. The patient's strength was kept up by small and frequently repeated doses of bovinine and milk, and milk and brandy. He rapidly convalesced. After all antispasmodics failed cupping proved successful.

NOTE ON GASTRIC ULCER AND ALLIED CONDITIONS.

BY GLENTWORTH R. BUTLER, A.M., M.D.,

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Read before the Medical Society of the County of Kings, May 19, 1891.

The title is unfortunately more pretentious than the matter of this paper. There are two points which I wish to note. The first pertains to the difficulties of rectal alimentation, not only in gastric ulcer but in all conditions where nutritive enemata are required. Ordinary milk, peptonized or not, cream, beef juice, beef blood, and the various proprietary forms of meat food usually constitute our main reliance in rectal feeding. Dilute food solutions are generally well borne by the rectum, provided the enema does not exceed four ounces in bulk and is given at intervals of four to six hours. But it is difficult in this bulk to administer a sufficient quantity of nutritive material to sustain the patient's strength for a reasonably long period. If the degree of concentration or the bulk is increased intolerance of the rectum usually follows, notwithstanding the addition of opium. Beef juice and blood frequently putrefy before absorption, and, at the best, are too dilute. One or two of the proprietary foods answer the requirements fairly well but are not altogether satisfactory. Milk being the best borne and blandest fluid, but lacking in actual amount of food required, it occurred to me some time since that if condensed milk could be used it would be both unirritating and sufficient. Happening to have suitable cases I have, therefore, used for this purpose ordinary milk with fresh condensed milk, such as is delivered daily, added to it in varying proportions. This mixture is peptonized as completely as possible. It forms a smooth, bland, creamy fluid which in my experience is very well borne. The milk should be sterilized before peptonizing. Patients have expressed themselves as feeling relief from the sense of hunger within an hour from the giving of enema so composed, and nurses state that the rectum is almost always empty after four hours, thus showing fairly complete absorption. A daily washing of the rectum with plain water, or water with a small proportion of boric acid, is extremely useful in preventing irritation of the rectal mucous membrane by portions of the enema which have not been absorbed, and consequently have undergone decomposition. The manufacturers of the condensed milk state that it requires three to four parts of water to be added to their milk to make it equivalent to non-condensed milk. It is therefore possible to give the equivalent of two or two and a half quarts of ordinary milk in twenty-four hours, by the rectum, which amount is ample for the continued nourishment of the patient, and there has appeared to be an increase of weight in at least two cases nourished in this way.

The second point which I wish to note is in relation to a class of cases which have some clinical resemblance to gastric ulcer. Frank cases of the latter disease characterized by marked hæmatemesis, extreme pain and vomiting soon after eating, and the familiar circumscribed spot of excessive tenderness, I only refer to in passing, their pathology, diagnosis, and proper treatment are reasonably sure and certain. There is a class of cases which are at first clinically difficult to determine. I have seen a number of such in hospital and private work. They usually occur in the course, or as a consequence of the non-pernicious anæmia of young women. The tongue is abnormally red and raw. There are pain and vomiting after taking food, and the ejecta sometimes contain a trace of blood. Seldom, if ever, is mucus found in large quantities, thus showing the absence of marked gastric catarrh. There is epigastric tenderness not so general as in catarrh nor so local as in ulcer. Usually two or three spots of unusual hyperæsthesia are found.

The pathological character appears, as indicated by the raw, red tongue, to be one of imperfect nutrition of the gastric mucous membrane. The epithelial cells do not attain their full development, are cast off untimely, and the mucous membrane is left in an irritable and inflamed, probably an eroded condition. It is a condition which explains its frequent association with anæmia. In some cases this gastric affection has appeared to be the primary factor, chronologically at all events, in the anæmic state.

In looking over the literature of the subject I find two references more or less confirmatory of what has been stated. Delafield [Handbook of Pathological Anatomy and Histology, p. 326, 3d edition] mentions superficial erosions of the gastric mucous membrane, which latter is congested and soft, and sometimes covered with small blood clots. They usually occur with some serious general disease, but may be idiopathic.

Two German observers [abstracted in the English "Practitioner," December, 1890], report similar cases. By estimating the hæmatin in the fæces they show that small gastric hæmorrhages take place, and by post-mortem that erosions of the gastric mucous membrane occur. The loss of surface is sometimes so small that it is detected only by most minute and careful examination.

Treatment directed in accordance with this idea of the pathological condition has usually been quite satisfactory. Complete rest of the stomach, or, if that did not seem necessary, the giving of milk and lime-water, constituted the dietetic treatment. The giving of silver nitrate on an empty stomach is a rational medicinal measure, on account of its well-known beneficial action on eroded or inflamed mucous surfaces. It may be given in doses of one-fourth to one grain, in pill or solution, with or without small quantities of opium or codeia. Later bismuth and similar bland substances are useful. Under this line of treatment recovery has usually been satisfactorily prompt, and on account of better nutrition the anæmia has been favorably influenced.

ŒSOPHAGEAL PERFORATION FROM TYPHOID ULCER.

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Read before the Medical Society of the County of Kings, May 19, 1891.

In the early part of August, 1890, A. S., æt. twenty-two, was confined with her first child. Her pregnancy had been normal, with the exception of a low specific gravity of the urine during the last two months. The labor was at full time. Toward the end of the second stage there was uterine atony, and a low forceps operation was done. The perinæum was not ruptured. A small mucous tear of the right labium required two or three catgut sutures. The puerperium was normal, and by the end of the fourth week the patient was feeling quite well and strong. During the fifth week there was a feeling of languor with moderate continuous malaise inexplicable so far as concerned the condition of the generative organs. The temperature was, unluckily, not taken at this time. During this period of malaise there was a rather sudden attack of abdominal pain, with slight chill, vomiting and diarrhœa, with a furred tongue, anorexia, recurring headache, and a temperature of 103.4°. Careful pelvic examinations, at this time and subsequently, eliminated any inflammation of the uterus or its surroundings. The uterus was movable, there was no exudate, and no tenderness in fornices or laterally. The next day the temperature was much lower, but not normal. It then rose gradually with morning and evening increase, until at the end of eighteen days from the acute attack it showed the fairly typical curve of typhoid fever, and had come down to a normal morning reading. During the course of the fever there was moderate diarrhœa, ochre-colored stools, notable tympanites, right iliac gurgling and slight tenderness, rose spots, and increase in the area of splenic dulness. There was no delirium.

About the time that the morning temperature became normal the patient began to complain of slight uneasiness, hardly amounting to pain, and felt only on swallowing. This uncomfortable sensation was referred to a point just above and to the left of the episternal notch. It gradually increased to actual pain in swallowing. Inspection of the throat revealed an ulcer on the left tonsil and two on the posterior wall of the pharynx, one of the latter being so far down that it required extreme depression of the root of the tongue to bring it into view. The latter ulcer was about the size of a split pea, the others somewhat larger. On the fourth day of the dysphagia, an inflammatory swelling of the soft tissues in episternal notch and over inner end of left clavicle became manifest. This rapidly increased in size extending upward, backward and downward, until at the end of the seventh day the triangular space embraced between left ear, left axilla and episternal notch was occupied by a peculiar, slightly reddened, œdematous and doughy swelling, making it extremely painful for the patient to move the head or the left arm. The dysphagia was now so marked that it was very difficult for the patient to swallow even small quantities of fluid. The temperature had risen to 102°.

The case now stood in my mind as one of typhoid ulceration of the œsophagus with consequent inflammation, and imminent if not actual suppuration of the œsophageal glands. Thinking that operative interference would be required, I suggested the propriety of getting surgical counsel, and my friend, Dr. G. R. Fowler, saw the case. He was at once struck by the resemblance which the local condition bore to cases of œsophageal perforation from malignant disease which had come under his observation, and expressed his opinion that this was an instance of perforation rather than of inflamed œsophageal glands. In this opinion I was forced to concur as giving a much more satisfactory explanation of the peculiar character of the inflammatory swelling. The indications for treatment were plain. The cause of the inflammation was the forcing of portions of liquid food through the perforations into the planes of cellular tissue of the neck. Luckily, the liquid food which the patient was taking, mainly milk, had been thoroughly sterilized, so that it is not probable that many pyogenic organisms had entered the tissues. To prevent further irritation from this source, the patient was kept for nine days on exclusive rectal alimentation, the mouth being rinsed with cold water from time to time in order to relieve the sensation of thirst and dryness. The nutrient enemata consisted of ordinary milk with fresh condensed milk added, and then almost completely peptonized. Of this, four ounces were given every four hours. The rectum was washed out once daily and proved tolerant.

After exclusive rectal alimentation was begun the fever abated, and the swelling and infiltration of the inflamed tissues grew steadily less, until on the twenty-second day from the beginning of dysphagia, and the ninth day of rectal feeding, the temperature was normal, the swelling gone, and not a trace of pain or tenderness remained. Stomach-feeding and recovery promptly followed.

If this was a case of perforation of the œsophagus from typhoid ulcer, it is unique. I have been unable to find a similar case, and the authorities state that perforation does not occur with typhoid ulcer, as only the mucous membrane participates in the ulcerative process, the muscular and cellular coats being unaffected. But a consideration of the history and local signs can lead to no other conclusion. Enteric fever, ulcers of the pharynx, dysphagia slight at first, but increasing in severity and referred to the episternal notch, the subsequent development of an inflammatory swelling, peculiar in character and distribution, form a clinical picture incapable, to my mind, of explanation by any other hypothesis.

A possible reason of the unusual intensity of the ulcerative process may be found in the fact that, at the incidence of the typhoid fever, the patient, to some extent, still possessed the modifications of blood and tissue characteristic of pregnancy and the puerperium.

PSYCHO-SENSORY INSANITY.

BY EDWARD C. MANN, M.D., F.S.S. (LONDON), BROOKLYN, N.Y.

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Psycho-sensory insanity is insanity of conduct, feeling or impulse, or all combined, without such appreciable intellectual derangement that it would be recognized as insanity, without the display of morbid feeling, impulse or conduct. Every good clinical observer is familiar with the frequent gradual change in feeling and conduct in prodromal insanity preceding the culmination of intellectual aberration, and it is a clinical fact in psychiatry that we find moral perversion and degeneration resulting from disease with but little, if any, appreciable intellectual lesion. The most striking feature of insanity in general, and the strongest proof of the presence of any of its forms, is the change which takes place in the individual's character and habits. These patients very often never evince the slightest mental incoherence on any one point, nor any kind of delusion. They are, however, utterly callous with regard to every moral principle and feeling, are seemingly unconscious of ever having done anything wrong, are completely destitute of all sense of shame or remorse when reproved for their vices or crimes, and utterly incorrigible throughout life. They stagger through life under the tyranny of a bad organization, and are more or less constantly under the influence of the compulsion of disease toward crime. There may be, and often is, decided intellectual vigor. The insanity of such persons is manifested rather by insane actions and conduct and feeling, than by insane ideas, delusions or hallucinations. Their conduct is manifested by foolish and violent acts, and it is considered by the laity as badness, rather than mental disease. There is often an entire change in character and habits, evinced by extraordinary acts and conduct. They make false assertions and entertain false views concerning their best friends and relatives. It generally takes some time before the patient's friends can convince themselves that his conduct is the result of disease, and many will look upon such an insane person's acts as the signs of depravity. After a time the mental disease becomes well marked, and overt acts are committed which leave no difficulty in making a diagnosis. False and apparently wicked assertions concerning the nearest relatives, or plots to annoy, may constitute almost the only symptoms at times of this form of insanity which the public can see or hear of, particularly if the nearest relatives carefully conceal from the world all outrageous conduct which is shown at home. Such patients deceive the public by their plausibility and their ready excuses for their conduct. They are very often the offspring of parents tainted with insanity.

There is a group of physical symptoms met with very frequently in psycho-sensory insanity which are rather coincident than causative, but which are very important to note. We find malformation of the cranium; flattening of the posterior part of the head; anomalies of the face; absence of harmony, symmetry and proportion between the different features, so that the individual is odd or ugly; squinting; nystagmus; choreic contraction of particular muscles; enormous size of the mouth; thickening of the lower lip; defects in the teeth; vaulted palate; malposition or imperfect development of the ears; imperfection of the external senses, and hyperæsthesia, neuralgia, and gastralgia. These defects or perversions are all of hereditary origin and are indications of hereditary predisposition or degeneracy. One or other of these indications may be detected in every patient of this class—psycho-sensory insanity—and it is very important that they should be associated with the clinical and mental symptoms as highly significant in making a diagnosis.

There is very often a mental disturbance at puberty. This may eventuate in delirium. The susceptibility is so great that the least emotion, contrariety, constitutional change, or even a common cold may often develop a paroxysm of delirium. A single glass of wine will produce delirium. Chlorosis, amenorrhœa, hysteria, tendency to syncope, feeling of suffocation, lachrymoseness, catalepsy, chorea, somnambulism, and all the signs of the minor neuroses, passing even into mild mania or melancholia are one and all encountered among females. In cities, children of this type are choreic, somnambulic, pietistic, or victims of persecution. If affluent, they are slaves to hypochondriasis and crime. These abnormal beings are ultimately urged by their intellectual activity beyond or outside of normal lines of conduct, and even before the invasions of such morbid mental phenomena as are patent to all. Their errors may be merely fantastic, eccentric, irrepressible, querulous, conceited, violent, lazy, instinctively wicked, and are likewise marked by cruelty, by habitual deceit, by indisposition to regular employment, and by dishonest habits. Undisciplined, they torment their family and defy their teachers. Their pathological perversity is incurable. Acute and clever they acquire and retain knowledge with a marvelous facility. They may be prodigies in the arts of music, drawing, calculation or poetry, or may become actors. But at the critical epoch of puberty their brilliant faculties fade and die out. Marriage precipitates the catastrophe in girls. Precocity is a sign of biological inferiority. Such crises may evolve either into increased mental feebleness or psycho-sensory insanity. Selfishness is the end and aim of their being. They prove disobedient children, inconstant lovers, unfaithful husbands, negligent fathers. Their heart is cold and hard. Cowardly, corrupt, jealous, vain, ambitious of distinction without the power of obtaining any eminence except that of extravagance and infamy, they combine a group of pernicious qualities which constitute them the disturbers and contaminators of all with whom they come into contact. They are dangerous members of society. We may find the absence of the organs and of the passions and functions which constitute and characterize the respective sexes. There may be either absolute hermaphroditism or partial, but marked departures from the normal structure and relations of parts. There may be beardless men who play the part of women, and bearded women who usurp the functions of men. With these characteristics are often associated symptoms of actual insanity or vices which are caused by an insane temperament. The non-development or malformation of the genital organs is often met with in the weak-minded and viciously disposed. The prevalence of solitary vices, erotic practices and of sterility in connection with anatomical defects cannot be separated from the description of psycho-sensory insanity. There are more revolting details that cannot be touched upon. Cases of psycho-sensory insanity are subject throughout their whole lives to attacks of congestion, with or without epilepsy or hemiplegia. These attacks pass off, leaving no other trace than alienation of mind manifested by conduct, feeling or impulse, or all combined, with no delusion, and with the reasoning faculties apparently intact. Independently of mental signs we may always detect, as I have remarked, physical symptoms in these cases. A retrospect of the history of persons thus affected, demonstrates that at the period of puberty they are affected with certain transitory mental symptoms.

Anatomical peculiarities in the organs and abnormal manifestations of the animal propensities are observed in them, and finally they are liable at various ages, as we have seen, to suffer from congestive conditions of the brain which have not been well recognized and studied. Psycho-sensory insanity is frequent among females belonging to the wealthy classes. It is often the first warning of other psychical affections. Its victims are, from their perverseness and morbid sensibility, plagues to themselves and all around. The physical signs may be noticed of severe headache; muscular pain; vertigo, which is epileptiform; disturbances of digestion; a capricious appetite, and many strange sensations are complained of. They are restless, unsettled, constantly crave change, and dislike home, repose, and occupation, and display innumerable signs of a faulty nervous organization. It is of the greatest medico-legal importance to carefully inquire for the existence of *petit mal* or masked epilepsy in all cases of psycho-sensory insanity, and in every case in which an overt act has been committed by a person of previous good character. This disease is much more fatal to mental integrity than the fully developed epilepsy, and often exists for years before the patient or anyone else suspects the true nature of the case. It may be noticed in a momentary suspension of consciousness; a fulness of the head; a feeling of vertigo; a slight confusion of mind; a vacant stare, and a momentary halt in conversation, with sometimes a singular movement of the hands and a movement of the head or muscles of the mouth; failure of memory; an extreme irritability of temper, flying into a passion without any provocation; perverseness of conduct; at times a sudden and unnatural obstinacy in trifling matters, with a disposition to annoy others and do things with the apparent purpose of giving trouble, all of these latter being frequently classed as under the inapplicable term devilish. Often the masked epilepsy occurs only at night which adds to the obscurity of the case. After awhile these attacks may develop into true epilepsy and still continue at nights. These attacks often induce homicidal feelings and impulses, and many destructive acts are committed by cases of psycho-sensory insanity who are unsuspected epileptics and are the direct product of disease.

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PEROXIDE OF HYDROGEN AS A DEODORIZER IN CANCER OF THE UTERUS.

Dr. G. W. Kaan, in the "Boston Medical and Surgical Journal," recommends the use of peroxide of hydrogen as a deodorizer in cancer of the uterus, and believes that it exerts some curative action. His method of using it has been to take about an ounce of the peroxide of hydrogen and an equal quantity of water, warmed by being placed in a pan of hot water, and injected through a soft rubber catheter so that the injection shall be sure to reach the back part of the vagina. Such an injection once or twice a day has been sufficient.

IOANNES, FERNELIVS, DOCTOR. MEDICVS.

N. Larmessin sculp,

JOHN FERNEL.

"The Hippocrates of his time" was in the sixteenth century the most eminent of French physicians. He was born in Picardy in 1506, or, as some say, in 1497, and was early noted for his intense application to his studies. We are told that even as a youth all other pleasures were to him insipid. He cared neither for play nor for entertainment nor for conversation. He gave lectures on philosophical subjects, which were as eloquent as those of the other masters of the time were barbaric.

After taking his degree in physic, he confined himself even more closely to his closet, being accustomed to rise at four o'clock in the morning and studying till it was time to lecture or visit his patients. He then examined the urine that was brought to him, for this was the method of those times with regard to the poor people who did not send for the physician. Coming home to dine, he shut himself up among his books till they called him to supper, returning to them the moment he had supped; and did not leave them till eleven o'clock, when he went to bed.

For many years he resisted the most importunate invitations of Henry II. and Catherine de Medicis that he would come to the court and become their physician, even feigning illness, for the reason that he feared that the bustle and activity of court life would interfere with his favorite studies, though at last he yielded and became physician to the court, where he found that, contrary to his fears he had more leisure to devote to his favorite occupation, had not his wife sickened and died with affliction on leaving her relatives, which so grieved the great physician that he died within a month after she was buried, in 1558.

He was the author of many works, and, among other things, was the first to describe the disease gonorrhœa. He treated syphilis with mercury, and recommended mercurial fumigations.

His "De Abditis Rerum Causis," libri duo, Paris, 1548, underwent about thirty subsequent editions; and his "Medicina, ad Henricum II., &c.," 1554, has been still more frequently reprinted, with various changes in the title.

He accumulated a vast estate by his business, which Plautius, his disciple and biographer, tells us amounted to from ten to twelve thousand livres a year.

He is considered one of the great restorers of medicine, and the first after Galen who wrote ably on the nature and cause of disease.

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EDITORIAL.

METHODIST EPISCOPAL HOSPITAL.

Dr. L. S. Pilcher will hold an operative surgical clinic at the Methodist Episcopal Hospital each Wednesday morning from 10 to 12 o'clock.

During the period from May 19th to August 10th this clinic will be discontinued, owing to the absence of Dr. Pilcher in Europe.

Dr. George R. Fowler will operate on Tuesdays, Thursdays and Saturdays at 10 o'clock A. M.

To these clinics members of the medical profession in general will always be welcome.

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KINGS COUNTY MEDICAL ASSOCIATION.

The June meeting of this Association will be occupied with a paper by Dr. Thos. H. Manley of New York, on "The Therapeutical Value of the Mercurial Salts in General Surgery."

All regular practitioners of medicine and medical students are invited to attend the meetings and participate in the discussions, and to remain as guests of the Association after the meeting.

BROOKLYN, E. D. DISPENSARY AND HOSPITAL.

The fortieth annual report of this institution, covering the year 1891, shows that during that period 26,628 patients were treated, and 32,340 prescriptions dispensed without charge. As the work of the institution is constantly increasing, the adjoining premises have been purchased and a new building will soon be erected which will be devoted to dispensary purposes only.

The President, George H. Fisher, Esq., in the report, favors a recommendation of the Secretary, which is as follows:

"There is one matter to which I desire to call the attention of the Board, and that is the desirability and entire feasibility of establishing a fairly comprehensive plan for outdoor services. Many cases come under our notice in the Dispensary which really require some home treatment. In some instances our doctors have voluntarily followed cases up to their homes, for which they ought to receive public commendation. But, if we districted off our part of the city, we should find doctors who would be willing to respond to such cases of need as our hospital authorities would call to their notice. I would open our drug room to their prescriptions in such cases for I would not hesitate to trust to the honor of a doctor's signature that this gift of the prescription was right and properly bestowed. It would add very little to our expenditure for drugs, but be of great help to many cases of real suffering."

Dr. S. S. Brown, who conducts the medical clinic, makes the following remarks in his report to the Trustees:

"I am treating nothing but the worthy poor who apply to my clinic for treatment. Since January 1, 1891, I have made it a rule to treat only those patients suffering from such diseases as I deem proper cases for my department; otherwise than these I have refused to treat as follows: 1st.—Patients tired of paying doctors' bills. 2d.—Patients suffering from alcoholism. 3d.—Genito-urinary cases. So long as we allow such patients to visit our institution, just so many more will its doctors have to care for. Therefore I am able to say that every patient I prescribe for is unable to obtain a doctor's services. In this way I protect the institution and at the same time do justice to my outside fellow practitioners, whose patients find their way into my clinic daily."

If equal care were taken in all the dispensaries, much of the criticism which has justly been made upon these institutions for pauperizing the communities in which they exist would be no longer applicable. By "genito-urinary cases" we understand the doctor to refer to those of venereal origin.

ST. MARY'S HOSPITAL.

Dr. George R. Fowler operates at St. Mary's Hospital every Monday and Thursday at 3 o'clock P. M. Members of the profession are invited to attend.

CENTRAL THROAT HOSPITAL AND POLYCLINIC DISPENSARY.

This hospital opened its doors for the reception of patients in December, 1890. 6,103 new patients were treated during the year 1891, classified as follows: Nose and throat, 981; eye, 786; ear, 282; heart and lung, 1,083; general medical and diseases of children, 1,780; diseases of women and general surgery, 1,191. The hospital is open daily at 3 P. M. to the worthy poor, free. A cordial invitation is extended to every one to visit the institution and inspect its work and equipment.

METHODIST EPISCOPAL HOSPITAL.

The fourth annual report, being for the year 1891, states that 1,045 patients were treated, the capacity of the hospital being seventy beds. The current expenses, including a large sum expended on improvements, were $38,867.

The number of surgical cases treated was 718, nearly one-half more than during the preceding year. The percentage of deaths was but $6^2/_3$, a remarkably low rate when it is considered that more than one-third of these were suffering from extensive and necessarily fatal injuries. A very considerable portion of the report, eighty pages, is devoted to detailed histories of special cases, many of which contain items of great professional interest.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

At the June meeting the following papers will be read and discussed: Functional Diseases of the Alimentary Canal Induced by Climatic or Temperature Changes. 1. Etiology, Pathology and Clinical History, Dr. Frank W. Shaw. 2. Therapeutics, Dr. Henry N. Reed. Some Remarks on Antitoxines, by Dr. George M. Steinberg.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Regular monthly meeting of the Medical Society of the County of Kings held at the Society's building, No. 356 Bridge Street, Tuesday evening, April 19, 1892.

The meeting was called to order at 8.20 P. M., with the President, Dr. Emery, in the chair.

There were about fifty members present.

In the absence of Dr. Hutchinson, the Secretary, Dr. Myerle, the Assistant Secretary, recorded.

The Secretary read the minutes of the last meeting of the Society, which upon motion, duly seconded, were approved as read.

REPORT OF COUNCIL.

The Council reported favorably upon the applications of Drs. Joseph G. Leiter, Constantine McGuire, Smith Ely Jelliffe and Evan F. Smith.

The following named gentlemen having been proposed and favorably reported upon by the Council of the last monthly meeting were declared elected members: Dr. George H. Mallett, Dr. John M. Clayland.

APPLICATIONS FOR MEMBERSHIP.

The Secretary read the following applications for membership in the Society:

Dr. R. C. F. Combes, Flushing Avenue, Woodhaven, L. I., Bellevue Hospital Med. Col., 1875; proposed by Dr. Walter B. Chase, endorsed by Dr. George E. Law.

Dr. Henry A. Higley, 15 Brooklyn Avenue, Col. P. & S. of N. Y., 1888; proposed by Dr. Ralph H. Pomeroy, endorsed by Dr. Clarence W. Sheldon.

Dr. Henry Thomas Hotchkiss, St. John's Hospital, L. I. Col. Hosp., 1891; proposed by Dr. J. H. Raymond, endorsed by Dr. George McNaughton.

Dr. Abram L. Sherman, Ninth Street, Bellevue Med. Col., 1889; proposed by Dr. William A. Northridge, endorsed by Dr. William Maddren.

Dr. J. Herbert Lawrence, 105 Sands Street, N. Y. U. Med. Col., 1882; proposed by Dr. Wm. M. Hutchinson, endorsed by Dr. George W. Brush.

The first paper of the evening, to wit, "Note on the Use of Bi-Chromate of Potassium as an Expectorant," was read by Dr. Joseph H. Hunt, and discussed by Drs. Williams, Emery and Henry.

The second paper of the evening, to wit, "A Brief Consideration of the Ætiological Relation of Pleurisy to Phthisis," was read by Dr. H. P. Williams, and discussed by Drs. Evans, McCorkle, Butler and West.

The third paper of the evening, to wit, "The Manner of Death in Pneumonia," was read by Dr. Henry Conkling, and discussed by Drs. Gilfillan, West, Briggs, Van Cott and Evans.

The Chair announced that the American Gynæcological Society would hold its next annual meeting in the city of Brooklyn in September next, and asked what action should be taken by this Society in regard to the same.

On motion of Dr. Raymond, duly seconded, it was resolved that the matter be referred to the Council to report upon at the next meeting

On motion the Society then adjourned.

David Myerle,
Assistant Secretary.

PROGRESS IN MEDICINE.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children, and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief to the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

FORCEPS IN AFTER-COMING HEAD.

Staedler (Arch. f. Gyn., B. 40, H. 1). The use of forceps for extraction of the after-coming head has to-day few advocates. The principal arguments for forceps in this class of cases are the ease and rapidity with which they can be applied, and the certainty of prompt and comparatively safe extraction. True, as Schroeder contended, in simple cases the forceps are unnecessary, and in difficult cases they may be of no advantage to the child and more dangerous to the mother than perforation. But sacrificial procedures cannot be compared with operations which aim to save the child.

It is a stereotyped statement of recent authorities that in all cases in which perforation is not called for manual methods are competent to deliver. But this does not establish their claim that forceps are useless in after-coming head. The value of forceps in these cases rests on other grounds than mere ability to deliver.

Not all cases that can be extracted by manual methods can be so delivered with safety to the child. The cervical portion of the cord is liable to be injured in difficult extraction by methods that involve traction upon the neck. In such cases manual methods are more dangerous to the child than forceps. The forceps is certainly more effective than manual procedures, and instrumental extraction may save many children which the opponents of forceps would condemn to the sacrificial operation.

The objection that the normal rotation of the head is disturbed by forceps does not hold since, the position of the head being carefully determined, the application of the instrument and the extraction may be perfectly conformed to the normal mechanism. The forceps the writer thinks especially indicated in cases in which the chin is over the symphysis and the head partly extended and fixed in the brim.

The paper includes a table of fifty cases of forceps extraction of the after-coming head with 72 per cent. of living children. In a number of these the pelvis was contracted and in all manual methods had first been tried ineffectually. This experience presents a strong argument for forceps as the most reliable mode of delivering the after-coming head in difficult cases and in all ordinary cases the safest for both mother and child. Except in easily managed extraction he would resort at once to instrumental delivery.

THE DECIDUA AND PREGNANCY.

Klein (Br. Med. Jour.) As the result of experimental research K. believes that in pregnancy the epithelium of the endometrium and the uterine glands undergoes a distinct fall in type ; that is to say, it changes from columnar-ciliated to cubical or pavement epithelium. The same change occurs in the Fallopian tubes in ectopic gestation. This change is peculiar to pregnancy and hence is a proof of pregnancy. The columnar epithelium remains unchanged in the deepest part of the glands. The decidua cells are simply specialized forms of the round cells in the connective tissue under the endometrium, from which they are directly developed. The decidua cells are in themselves not absolute proof of pregnancy as the connective tissue cells of the uterus may undergo similar changes under other influences besides pregnancy. Ultimately the decidua cells undergo degeneration, a true necrobiosis rather than fatty degeneration, and this change is apparently the actual cause of birth. In other words, the ovum becomes a foreign body and is expelled by uterine contraction. Premature degeneration of the decidua cells accounts for abortion.

WASHING OUT THE STOMACH IN PUERPERAL FEVER.

Dr. Swieeicki (Br. Med. Jour.) Puerperal septicæmia, like other general infections, is due to the toxalbumens secreted by the bacteria. Natural cure is obtained by the elimination of these septic products through the urine, sweat, saliva, fæces, etc. This elimination must be assisted by treatment. The organism should be washed out. Dr. S. successfully treated a bad case of puerperal fever on these principles, beginning on the fifth day after delivery. About a quart of the physiological salt solution was injected into the stomach, at first hourly, later every two or three hours. Twice daily a hypodermic injection of one-seventh grain of pilocarpin was administered. Alcohol was given as a stimulant. The patient had fourteen quarts of the saline solution and six hypodermic injections of pilocarpin altogether. She showed improvement from the second day, and continued to gain in proportion to the increase of urine, sweat and saliva. The temperature fell, the pulse became full, and the rigors less frequent and shorter. Washing out the stomach with the saline solution may conveniently be replaced by enemata of the same fluid.

PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital.

ON TUBERCULOSIS.

William Osler (Practice of Medicine, 1892) has given a description of the above disease. An analysis of some of the divisions of the article is here given:

Mode of Infection:

1. Hereditary transmission.
2. Inoculation.
3. Atmosphere.
4. Milk.
5. Meat.

Location of Tubercles:

In post-mortem examinations upon 275 cases, tubercles were found in the lungs in 272; intestines, 65; peritonæum, 36; kidney, 32; brain, 31; spleen, 23; generative organs, 8; liver, 12; pericardium, 7; heart, 4.

Clinical Forms:

Among those mentioned are: (1) Acute tuberculosis, in which there is a general involvement, the existing cause may come from deposit in the body. The symptoms may be constitutional, pulmonary or cerebral. In tubercular meningitis recovery never occurs. (2) The lymphatic glands may be diseased. The term scrofula was once applied to this condition, but it is tubercular. It has either a less severe form of poison, or some local peculiarity which causes a diminution in intensity. The disease may be local, being then a form of adenitis. Some cases have a tendency to recover; in others suppurative processes exist. Quiescent adenitis is regarded as likely at any time to cause general infection. It may exist as general tubercular lymphadenitis, the lungs not being particularly involved, or there may be some local change in the glands. The involvement of the mesentery may be a lesion of itself, or it may be secondary to other changes. (3) Pulmonary tuberculosis may be seen as acute pneumonic phthisis, broncho-pneumonic phthisis, and chronic ulcerative phthisis. This latter is the usual form of chronic tuberculosis. Cavities may exist; these may be:

1. Fresh ulcerative.
2. Circumscribed (well-defined walls).
3. Quiescent.

Mode of onset:

1. In the digestive tract.
2. In bronchitis.
3. In the pleura.
4. In hæmorrhage.
5. In laryngitis.

The symptoms of this condition may be pain, cough, expectoration, hæmorrhage, dyspnœa, fever, sweating, emaciation.

Death may come from

1. Asthma.
2. Syncope.
3. Hæmorrhage.
4. Coma.

Treatment is first considered in a discussion of the natural cure. The author believes that this occasionally occurs. Evidences of its results may be found in thickened pleura and cicatrices. The indications for treatment are surroundings, special, and general agents. Fresh air is important, and patients should be encouraged to go out, only inclement weather keeping them in. The Adirondacks are preferred among American resorts. The usual remedies are described for general and special conditions. Strapping is recommended for severe pain in the pleura.

PREVENTIVE MEDICINE.

BY E. H. BARTLEY, M.D.,
Professor of Chemistry and Toxicology, and Lecturer on Diseases of Children, Long Island College Hospital.

THE BEHAVIOR OF ANTISEPTICS TOWARD SALIVARY DIGESTION.

Under the above title Prof. Weber, of Columbus, Ohio, publishes in the "Journal of American Chemical Society," January, 1892, the results of tests made under his direction by C. T. Fox. The agents used in the experiments were borax, salicylic acid, calcium sulphate and saccharine. The tests were made with one grain of starch in 15 c.c. of water, and 5 c.c. of saliva, with varying amounts of antiseptic, and with varying times, ranging from 1 to 60 minutes. The effect was determined by estimating the sugar formed with the starch alone, and with the antiseptic added.

It was found that when the antiseptics were present in the proportion of 1 to 210 parts of the mixture, the diastasic action of the saliva was entirely arrested by all these agents during the first five minutes. For the longer times, calcium sulphite was without effect, while borax retarded the action, and salicylic acid and saccharine completely arrested it. These last two agents prevented the action of saliva upon starch when present in the proportion of 1 in 420. Salicylic acid greatly retards the action when present in the proportion of 1 in 840; but not when the proportion was reduced to 1 in 1050. Saccharine showed no effect when the proportion was reduced to 1 in 840. Calcium sulphite failed to retard the action when present in the proportion of 1 in 420. Borax showed a great retarding effect, even in the proportion of 1 in 2100. These experiments were undertaken to determine the effect of the various preservatives for food containing them, and show that mixtures containing them should not be permitted to be added to articles of food.

FACTS ABOUT SCARLET FEVER.

In a circular issued by the Secretary of the State Board of Health of Minnesota, on "Scarlatina," the following statements are made as the result of statistics collected in that State :

1. Sixty-five per cent. of the deaths from this disease occur in children under five years of age.
2. Thirty-three per cent. of deaths occur in school children.
3. It has not proved fatal in Minnesota in five years to persons over thirty years of age.

4. It is most fatal in the spring. The mortality begins to rise in the late fall, and increases till May.

5. The mortality is greatest in large cities, and least in a scattered population.

6. The disease is spread chiefly by personal contact, and especially by infected clothing.

7. That schools are largely instrumental in spreading the disease.

8. That isolation of the sick, and thorough disinfection of persons and things are the best modes of controlling the spread of the disease.

THE ATMOSPHERIC HYPOTHESIS OF EPIDEMICS.

A paper upon this subject was recently read at a meeting of the Royal Meteorological Society, by the Hon. Rollo Russell. He is of the opinion that no kind of epidemic is ever conveyed or spread by the general atmosphere. That all epidemics are caused by human conditions and communications capable of control. He investigates the manner of propagation of influenza, and gives the dates of the outbreak in various oceanic islands. He calls attention to the fact that no air current takes a year to cross Europe, but this disease traveled faster or slower in proportion to the rate of human intercourse. Across frozen and snow-covered countries, as well as over tropical regions, it is conveyed at a speed corresponding with the movements of the population and merchandise, and not with the movements of the atmosphere.—*Sanitary Inspector*, from *Science.*

RESULTS OF ARMY HYGIENE.

Sir Joseph Fayer in his address to a section of the Hygienic Congress of last summer, stated that the death rate of English soldiers stationed in India in 1859 was 69 per 1,000. Since that time certain changes in housing, food, water, clothing, etc., had been adopted, with the result that in 1886 the rate was 15.18 per 1,000, and in 1888 it was 14.84 per 1000. The rate among the native troops was for 1886, 13.27 per 1,000; and in 1888, 12.84 per 1,000.

Professor Stokvis, before the same Congress, stated that since the Dutch had introduced artesian wells to furnish water for their soldiers in India, dysentery and cholera had greatly diminished. While the percentage of deaths among Dutch soldiers in India from 1874 to 1878 was 15 per 1,000, it was in 1879 to 1883 only 6.4 per 1,000, and from 1884 to 1890 it was only 3 per 1,000.

Dr. von Coler, Director-General of the Medical Department of the Prussian Army, stated that in the years 1888 and 1889 alone 79,500 less men applied for medical treatment than the average number for the ten preceding years. The death rate had decreased two-thirds in the same time, it being 6.9 in 1868, and 2.3 in 1889. He states that during the year 1890 they calculated that this decrease saved the lives of 1,500 men, besides the gain to the army of a less number of men on the sick-list. This great saving of life and suffering, and the immense saving to the country of expense of the best men of the Empire he attributes to the teachings of hygiene and improved sanitation as practiced in their army. As army statistics are generally regarded as more reliable than those collected from cities, these figures speak impressively on the value of preventive medicine.—*Sanitary Inspector*, January, 1892.

OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,
Assistant Surgeon, Brooklyn Eye and Ear Hospital.

RELATIVE FREQUENCY OF MYOPIA AMONG JEWS AND CHRISTIANS.

Stevenson (Oph. Rev., April, 1892) while examining the pupils of certain London schools noted the frequency of myopia. Those examined numbered 1,149, and ranged in age from seven to seventeen years. They were chiefly of the lower middle class of society. The method of examination was somewhat crude, but as the object was not to show the actual percentage of myopia, but rather its relative frequency in the two sects, and as the same methods were employed in each instance, the results may fairly be accepted as indicative of the proportionate frequency of myopia among Christians and Jews. Among the latter myopia was nearly five-and-one-half times as frequent as among the former, the increase being relatively greater among the boys than among the girls. Thus there was greater frequency of myopia among the Jews than the Jewesses, while among the Christians the percentage of myopia was less among the boys. The number of cases examined is, it is true, not large, but the figures given certainly support the current belief that Jews are more subject to myopia than Christians. Similar results were obtained in 1879, by Nicati, in some of the French schools, though the difference was less marked, his proportion being about two to one.

Whether the cause of this difference lies in some inherent race trait, or to local causes, less careful ocular hygiene with perhaps increased use of the eyes, the evidence at present at our command is insufficient to enable us to decide.

MINERS' NYSTAGMUS.

While this is a subject in which our special interest is almost purely a scientific one, it is worth while to note in a few words a review in the Oph. Rev., April, 1892, of a recently published monograph on the subject by Simeon Snell. After a careful study of the conditions under which the miners work, and the details of numerous cases of miners' nystagmus, he very positively attributes the affection to the excessive action of the ocular muscles demanded by the constrained position in which the miner works. While not denying some influence to insufficient illumination, he considers it as a factor of subordinate importance. He does not believe it due to central changes. These views are somewhat at variance with those of other competent observes, especially as regards the importance of illumination. Miners' nystagmus would seem to be due to a "continued effort to fix under conditions which render continued fixation peculiarly difficult," and the importance of each factor must be determined in each case. Sometimes a change simply in the manner of work, and not in its nature, is sufficient to give relief to this distressing condition, and the volume in question gives many valuable points as to prevention and treatment.

THE CORTICAL PUPILLARY REFLEX.

Haab, in 1886, described a contraction of the pupil which he believes due to the action of the cerebral cortex. He now reports further on this pupillary reflex (Ref. in Hirschberg's Centralblatt, Jan., 1892). The phenomenon consists in contraction of the pupil when one is looking not at, but by a light somewhat laterally placed in an otherwise darkened room, the contraction occurring when only the attention is given to the light, no change in the fixation of the eyes occurring. This contraction is equal in both eyes, like the ordinary consensual pupillary reflex, and its degree varies with the brightness of the light used. Accommodation, convergence and the ordinary factors of pupillary contraction could be excluded in Haab's experiments, and he therefore believes it due to a reflex action started in the cerebral cortex. This naturally necessitates the supposed existence of descending fibres from the cortex to the oculomotorius-stimulation of which is continued into the pupillary fibres of the latter. He also attributes to this cortical reflex a part in the production of the small oscillatory movements of the pupils seen in normal individuals. The reaction is best obtained when the light is at angle of about 45° from the line of fixation which should not be changed during the test.

CHILDREN AND THEIR DISEASES.

BY FRANCIS HART STUART, A.M., M.D.

HYSTERIA IN INFANTS AND CHILDREN UNDER TWO YEARS.

M. Ed. Chaumier, of Tours (La Semaine Medical, December 2, 1891), thinks that in very young children hysteria is often overlooked and mistaken for other things. Its symptoms vary according to the severity of the attack. When very slight it takes the form of frequent causeless attacks of passionate screaming. In more marked cases the limbs become more or less rigid and the face purple and congested, and sometimes these symptoms are accompanied or followed by tremor. When more severe, the child suddenly begins to cry and loses consciousness completely. The body is usually stiff and the mouth wide open, but sometimes the body is quite flaccid. In some cases these attacks come on in the middle of a fit of coughing, and they are then apt to be mistaken for false croup. He also describes a more aggravated form of the disease, in which the symptoms resemble those met with in adult cases. The child loses consciousness and becomes quite rigid, with its eyes turned up, and the stiffened limbs may twitch or they may be thrown about wildly. In other cases the body is quite flaccid and inert. Sometimes such attacks occur at short intervals; they are then often mistaken for meningitis. Hemianæsthesia and hyperæsthesia may exist, but they are almost impossible to make sure of; but contracture and paralysis cannot be overlooked, nor can the absence of the ocular and pharyngeal reflexes which M. Chaumier has frequently observed. The prognosis is favorable. Recent investigations prove that hysteria is more easily cured in the infant than in the adult; and there is reason to believe that the earlier the treatment is begun the more likely it is to be successful.

DIPHTHERITIC ALBUMINURIA AND NEPHRITIS.

Dr. Jos. Kuck (Münchener medicinische Abhandlungen, 11 Reihe, 3 Hefte) summarizes the results of his observations on these subjects, in 436 cases of pure diphtheria, as follows: 1. Albuminuria is met with in about 86.5 per cent. of all the cases of diphtheria occurring in Munich. 2. The earlier the albuminuria appears the more severe is the diphtheria and the worse the prognosis. 3. There is no constant relationship between the albuminuria and the temperature. 4. Formed elements are but rarely found in the urine; and, post-mortem, the kidneys appear normal in the great majority of the cases. 5. When there is much albuminuria and nephritis, streptococci are generally found in the kidneys. 6. Rare cases of diphtheritic nephritis with œdema and uræmia do occur, but hæmaturia is extremely seldom met with.—*Edinburgh Medical Journal*, January, 1892, p. 672.

◆

DISEASES OF THE SKIN.

BY SAMUEL SHERWELL, M.D.,

Clinical Professor of Dermatology, Long Island College Hospital; Attending Physician, Brooklyn Hospital; Surgeon to Skin and Throat Department, Brooklyn Eye and Ear Hospital.

ON AN EPIDEMIC SKIN DISEASE SOMEWHAT RESEMBLING ECZEMA AND PITYRIASIS RUBRA.

Thos. D. Savill, M.D., Med. Supt. of the Paddington Infirmary, London. (British Jour. of Dermatology, Feb. and March, 1892.) In both the above numbers of the journal named will be found an interesting description of what would appear to be a new epidemic contagious disease of the skin. The author is not alone in his conclusions, since many men eminent in dermatology in that country have the same conviction. Dr. J. S. Risien Russell, of the Pathological Laboratory of University College, follows in the April number of same journal with his descriptions of the bacteriology of this form of "epidemic exfoliative dermatitis" as he prefers to call it. From his experiments also he claims it to have a special identity of its own, and differentiates the coccus found in it from that of the ordinary staphylococcus pyogenes albus, by its different appearance under the microscope, and its different action on the media in which the germ is cultivated. A great deal has been written in the English journals about this trouble which has been by no means confined to one institution or one part of the city, and about which many theories are rife; notably the one that it stands in some sort of relation to the influenza epidemic, or to put it better, that that epidemic has in some manner an ætiological significance. It would certainly seem positive that it is both epidemic and transferable, and in some states of the system dangerous, even fatally so.

Dr. Savill gives a history of about 78 cases, male and female, at the Paddington Infirmary; speaks of 73 that occurred at the workhouse, and reports many other statistics of cases, as at Marylebone

Infirmary, St. Mary's Hospital, the Female Lock Hospital, Hanwell Asylum, the Lambeth Infirmary, etc., etc. Illustrations are also furnished, some of which show patches of exfoliated epiderm as large as the adult palm, and in fact in one case an exact cast of this portion of the body.

EXCISION OF THE SYPHILITIC CHANCRE FROM A PRACTICAL POINT OF VIEW.

Alex. Renault, Paris, Visiting Phys. of the Hôpital de Lourcine. (Annales de Dermatol. et de Syphilographie, Vol. iii., No. 1, Jan., 1892, p. 10.) The author in a very judicial way gives the summing up of evidence pro and con; speaks of Cornil's report to the Acad. Med., France, in 1887; refers to the testimony of Drs. Neumann, Kaposi and Neisser, and to Fournier's paper on the subject. He re-examines in brief the cases and evidence of the more prominent believers in excision as, Drs. Jullien, Derville and Edward Ehlers of Copenhagen, giving Dr. E. Ehlers the palm for the most exhaustive and best work on the affirmatory side of the subject. His own résumé in conclusion appears at present to be about the position taken in France, and so far as we know by prominent syphilographers in this country—as Taylor and others—he, Dr. R., says:

"In fine we believe eradication has been passed upon. It does not prevent general infection. As far as our knowledge goes, there has not been an absolutely proven case in which production and confrontation of the suspected woman has been made, and by absolute duration of time without symptom. As long as we do not know the micro-organism of syphilis, we cannot absolutely know if before infecting the general organism it may not remain quiescent for a certain length of time near the point of entry, so there can be no necessary criterion as yet that should lead us to an operation of this nature. Our operative surgical intervention after all, then, serves only at best to cure a local evil a little more rapidly sometimes than the "vis medicatrix" of nature, aided by appropriate dressings, and would in turn expose him to greater possibilities of evil."

BRIEF COMMENTS ON THE MATERIA MEDICA, PHARMACY AND THERAPEUTICS OF THE YEAR ENDING OCT. 1, 1891.

E. H. Squibb, Brooklyn. (Ephemeris, April, 1892.)

In the above journal and date, the author gives a valuable review or résumé of the newer pharmaceutical preparations generally, with what appears very exact justice to their merits. Incidentally he considers a number of synthetic remedies of the aniline group of which there are now so many and confusing a number, and terminology. Among the remedies he quotes as more or less used in dermatology, may be mentioned aristol, dermatol, euphorin, europhen, ichthyol, iodoform, etc. Creolin and pyoktanin we think are credited with too much efficacy; and resorcin is hardly given enough credit for its value; but on the whole, the doctor's remarks seem to us extremely dispassionate and judicial.

When we see advertised in the medical press of different places and countries the extravagant claims and advertisements of and for this and that medicament, very often proprietory in character, it does us good to see their claims critically considered, by a competent observer.

The same judgment would seem to apply to the other remarks in the article on remedies, not either connected or necessarily so with treatment of diseases of the skin.

MISCELLANEOUS.

BROOKLYN TRAINING SCHOOL FOR NURSES.

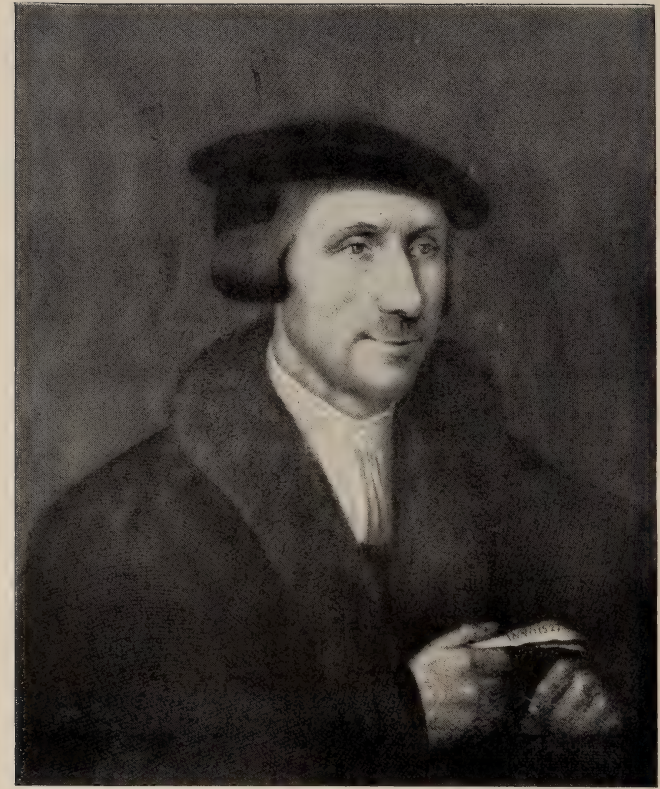
The Brooklyn Training School for Nurses held its graduating exercises at the Home, corner of Raymond and DeKalb, on the evening of May 17th. The avenue leading through the hospital grounds was brilliantly illuminated with Chinese lanterns, and the Home was thronged with friends of the school and of the graduates. The Hon. Seth Low presided. The diplomas and pins were presented by Mrs. Low and Mrs. Forman. Addresses were made by Dr. Chas. Cuthbert Hall and Dr. Alexander Hutchins. The house was thrown open, and the excellence and refinement of its appointments were the admiration of the guests. Refreshments were served, and the reception continued till a late hour. The following young ladies were graduated :

Fall Class, 1891.

Nina Lilla Smead, Agnes Kleman Phymister, Frances Aurelia Gordon, Elizabeth Wand, Mary McAllan, Anna M. Reddington, Mabel Kate Mandeville.

Spring Class, 1892.

Eva Florence Judge, Sara A. E. Hoff, Helen Mary Mitchell, Ada Lindsy Borlase, Rose McWilliams, Carinna Daisy Hannaford.



THOMAS LINACRE, OR LYNACRF.

The founder of the Royal College of Physicians, and is regarded as one of the most classical scholars of his time He was well descended; was born in 1460 at Canterbury, and bred at All Souls College, Oxford. Thence he visited Italy, where he was so fortunate as to gain the friendship and patronage of Lorenzo de Medici, with whose sons he became a pupil of the great masters of Latin and Greek, and is said to have applied himself so well to these studies that he excelled his teachers in their own specialties.

He studied philosophy at Rome, and having taken a degree of Doctor of Medicine at Padua, he returned to England and settled at Oxford, and read lectures upon medicine.

He was not long, however, permitted to remain in this place; for Henry VII. called him to his Court in 1501, and appointed him preceptor to his son, the Prince Arthur, and he was subsequently made physician to the king himself, and afterwards to his successor, Henry VIII., Prince Arthur, and the Princess Mary. Among his patients were Erasmus, who said of him: "Is aught more acute, more exalted, or more refined than the judgment of Linacre?" and Cardinal Woolsey, whose interest he secured to procure from the king (Henry VIII.) a charter, in 1518, for the Royal College of Physicians.

Previous to the establishment of this body, the power of granting authority to practice was vested in the bishop of the diocese in which the applicant wished to practice The constitution of the college expressly provided for the examination of the candidates intending to practice, by the President and three of the Elects, who have power to give letters of testimony to the qualified, unless they should be graduates of the Universities of Oxford and Cambridge.

Linacre was appointed the first president of the college; and he retained the office for the remainder of his life, a period of seven years, during which the meetings were held in his house, which at his death he bequeathed to the college.

Linacre founded two lectureships of medicine; the one at Oxford and the other at Cambridge, imposing the duty upon the lecturers of explaining Hippocrates and Galen to the students.

Linacre published several works, mathematical, philological and medical. His medical works were translations from Galen, which critics say makes Galen speak better Latin in the translations, than he did Greek in the original.

A few years before his death he entered the priesthood, and held various ecclesiastical positions. It is recorded, that only a little before his death, when worn out with fatigue and sickness, he read for the first time Christ's sermon on the mount; but struck with the purity of its precepts, he hurled it away in a passion, saying: "Either this is not the gospel or we are not Christians!"

He died in 1524, and was honored with entombment in St. Paul's Cathedral, where a handsome monument has been erected to his memory. J. H. H.

THE

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

THE INFLUENCE OF HABITUAL POSTURE ON THE SYMMETRY AND HEALTH OF THE BODY.

BY ELIZA M. MOSHER, M.D., BROOKLYN.

Read before the Medical Society of the County of Kings, March 15, 1892.

In connection with several educational institutions, and in the general practice of medicine, it has been my duty to make a careful physical examination of many hundred girls and women.

Early in this work I observed variations from the normal symmetry of the body. Some of these variations were demonstrable by tape-measure and calipers. Others, although obvious to the eye, were incapable of measurement. As these cases have multiplied it has been possible to classify them and to discover to some extent at least the influences at work in their production.

It is the object of this paper to present some of the results of this study. The time allotted to it, however, will only permit a discussion of those changes in symmetry which are produced by long-continued habit, best seen, therefore, in individuals at middle life, when, as Emerson says, "The tell-tale body is full of tongues. The wise man reads its private history in its looks, its gait, its behavior."

In order to present the subject clearly it will be necessary to briefly review the postures which the body naturally takes when in equilibrium, standing and sitting. The human skeleton consists of two symmetrical halves which exactly balance each other It is clothed by muscles, which when properly developed and equally used, give to the body its shapeliness and grace. Unevenly developed, and unequally used, they have the power to distort and cripple the whole structure. In the standing posture the pelvis (which is practically one solid bone) becomes the pivotal region of the trunk; upon its position the symmetry of the body depends. Balanced equally upon the legs, the crests of the ilia occupy a horizontal place, and move upon an axis which passes vertically through the centre of the sacrum.

The spinal column with its weight of arms and head, rests upon the pelvis; with the arms hanging at the sides, and the head erect, the lateral portions of the body balance each other, so that a line drawn through the spines of the scapulæ is parallel with that drawn transversely through the pelvis, and the axial line of the pelvis prolonged upward traverses the centre of the trunk and head.

Remove either foot from the floor, and the leg instead of being a support, becomes a weight attached to the pelvis. To maintain its equilibrium upon one foot the body must shift some other weight to the opposite side of the median line, to balance the weight of the unsupported or partially supported leg.

The head and shoulders are used as *counter* weights. If the unsupported leg is thrown forward, they drop backward, and *vice versa.* If it is thrown outward they fall to the opposite side. In this process of equilibration the spinal column plays a most active part; made up as it is of movable segments, it permits this process of shifting the weights, by curving upon itself; shortening upon one side and lengthening upon the other; at the same time rotating, if necessary, upon its axis.

The ribs through their articulation with the spinal vertebræ, participate in its movements, becoming approximated upon the concave side of its curve, and separated upon its convexity. The scapulæ being attached to it only by muscles, move with the arms and head, independent somewhat of the movements of the spine. They possess, by virtue of their attachment, however, a powerful leverage upon the dorsal region of the spine.

In the sitting posture the weight of the lower extremities, as a modifier of posture, is removed. The pelvis becomes fixed in the position which obtained, when it rested equally upon both legs.

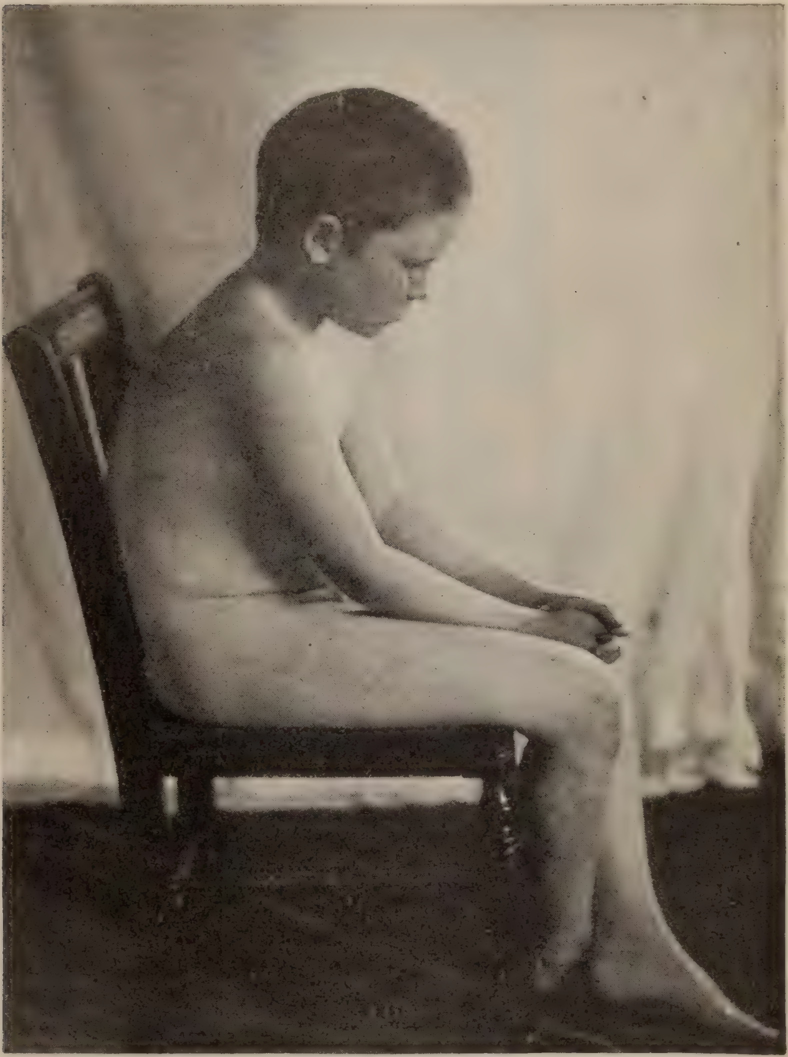

FIG. I.
Influence of weight of arms and head on shape of back in sitting posture. (Common posture of child at study.)

The lumbar region now becomes the pivot upon which the remainder of the trunk moves. The "balance of power" is vested in the arms, which hang like weights upon the base of an inverted cone; suspended at the sides upon the hip line, they balance each other, permitting the spinal column to poise itself upon the pelvis, and the head to rest upon the spine. This attitude is maintained with comparatively small expenditure of muscular force. Remove the weight of one arm (by supporting the elbow) and the trunk finds its resting place with the weighted shoulder depressed, and the head thrown towards the opposite shoulder. Swing both arms in front of the hips and the normal antero-posterior curve in the upper spine

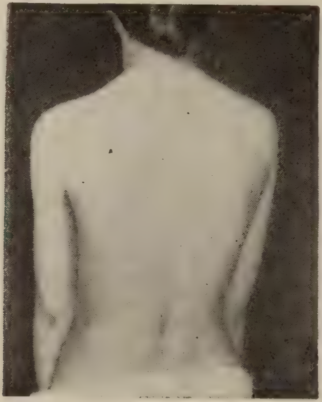

FIG. 2.

Influence of weight of arms on shape of back when suspended *in front* of hip-line.

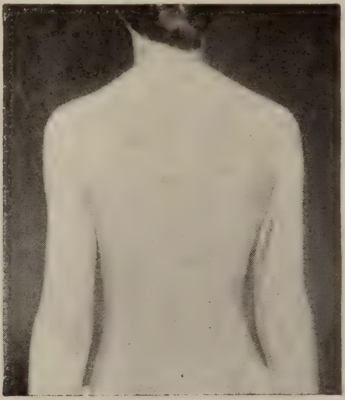

FIG. 3.

Influence of weight of arms on shape of back, when suspended *behind* hip-line.

increases, while the head drops slightly backward, projecting the chin forward,—at the same time the scapulæ are drawn apart.

Suspend the arms behind the hips and the upper antero-posterior spinal curve straightens, while the normal corresponding curve in the lower dorsal region increases. Support both elbows and the shoulders approach the head, not only by removal of their weight, but by the sinking of the trunk downward, by the force of gravitation

The posture of the head, owing to the intervention of mobile cervical vertebræ, does not in itself greatly modify the posture of the trunk, in standing, whereas, as has been shown, the position of the lower extremities and the movements of the trunk have much to do with the posture of the head. By this brief review it is evident that gravitation (so called) is the great controlling force of the body at rest, and that its work is beneficent, tending to take the place as far as possible of muscular activity in the maintenance of the upright posture both in standing and sitting. The weights are shifted by muscular movement and when equally placed "gravic force" aids the muscles in maintaining them in position.

Having reviewed the postures which the body naturally assumes with its supports and weights variously adjusted, we are now prepared to consider the influence upon the shape of the body, of permitting it to fall *habitually* into one of these natural postures.

The will presides over the activity of the skeletal muscles, but it has so much beside with which to occupy its attention that it permits them to do their work more or less automatically, and it happens, sooner or later, in the life of the individual, that certain groups of muscles take upon themselves the larger part of the work of maintaining the body in the standing or sitting posture. Very trivial causes may decide the choice which is to affect the symmetry if not the health of the body. More often, however, *enforced* attitudes, as those of the school-room and the workshop, produce this result. In whatever way acquired the influence upon the shape of the body is potent for good or evil.

I have already spoken of the three fundamental postures which the body assumes in standing, viz.:

1. With both extremities evenly placed beneath the pelvis.
2. With one leg thrown forward, as in the attitude of walking.
3. With one leg thrown outward or in abduction.

The influence of the first as a favorite posture would be to maintain the symmetry of the body, as by it all its parts are evenly placed. But experience shows that this position cannot long be maintained. Through fatigue one support or the other drops out from under the weight, whereupon the posture changes to the third of the series. The second position, viz.: with one leg in advance of the other, as in walking, permits the body to rest upon one extremity with very slight reduction of the normal spinal curves. The bones of the skeleton are all so placed in this posture as to retain the muscles in normal and symmetrical relations, as regards the distance between their origin and insertion, the direction of their fibres, etc. The backward movement of the head and shoulders to balance the weight of the forward leg, calls into action the muscles of the cervico-occipital region, while those upon the anterior aspect are placed in an equal degree of extension. The influence of this is to fix the scapulæ and upper ribs in a position favorable to the best action of the respiratory muscles, hence the posture is conducive to chest expansion. The head cannot drop to either side without disturbing the equilibrium of the body, and the soft tissues of the face, which are apt to become distorted by unequal muscular movement and gravitation, retain their symmetry under the influence of this position, even though it become habitual. The internal organs swing evenly upon their supports, presenting thereby no impediment to the blood current, an element more important, perhaps, to the health of women than to men. The ease with which the weight of the trunk can be transferred from one extremity to the other not only makes this a posture which can be retained a long time without undue fatigue, but renders it favorable to the making of gestures and the use of the voice. Hence it

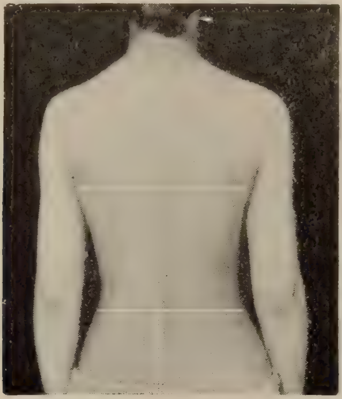

FIG. 4.

Shape of trunk in the "second fundamental posture" (of the author), viz., resting on the left foot with right thrown forward as in walking.

naturally becomes the favorite posture of the orator and the public singer.

Because of the narrow base which it gives to the body, however, and the corresponding sense of insecurity which the individual unaccustomed to it feels, this is not the posture naturally chosen. In standing with a stable foundation beneath the feet, and a little training, it, however, becomes easy to assume it, and it is always healthful.

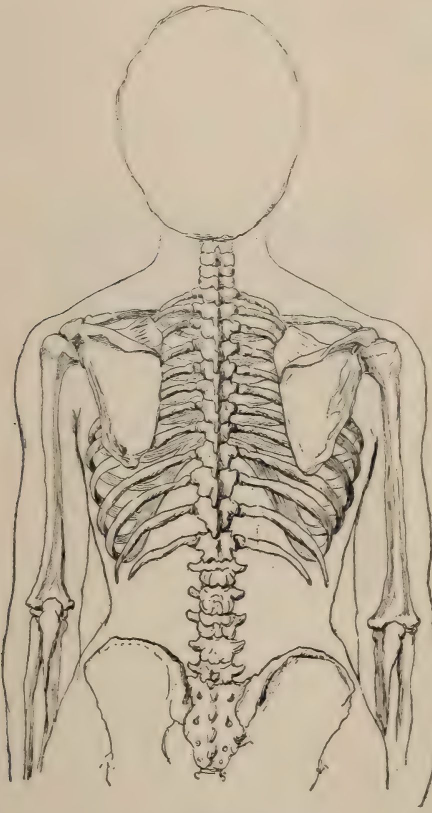

FIG. 5.
Shape of skeleton in "second fundamental posture."

The third fundamental posture of the body in standing, is the one most commonly chosen as the habitual one, doubtless because of the broader base which it gives, when needed, for the support of the trunk. The change from the walking posture to this, too, is so radical that it gives a sense of rest most grateful to the tired tissues.

The best way to make a critical study of this position with reference to its healthful tendencies or otherwise is to examine an individual whose occupation has for several years necessitated the standing posture, and who has acquired the habit of dropping upon one and the same leg.

Understanding symmetry to mean "exact accordance of the two halves of one body," we place our patient evenly upon two feet and compare the two sides. We find in most cases the following variations more or less well marked, according to the general health of the individual and the length of time the posture has been habitual. (In robust persons the muscles and soft tissues are not moulded by posture as readily as in the poorly nourished and overworked.)

If the left extremity has been the favorite one (as it is in a large number of cases) the left thigh will measure a little more than its fellow. The left hip is higher than the right, and the spinal column is slightly curved, presenting its concavity toward the supported side. In exaggerated cases, and when the right arm has been much used, a compensatory curve is found in the upper dorsal region, the concavity of which presents in the opposite direction. In all cases there is marked projection of the angles of the ribs upon the unsupported side, indicating more or less rotation of the bodies of the spinal vertebræ toward the right. The ribs upon the left side approach each other and the crest of the ilium, shortening in a very marked manner the body line upon that side. The spaces between the ribs on the right side are proportionately widened, and the lengthened body line lacks the curve presented by the op-

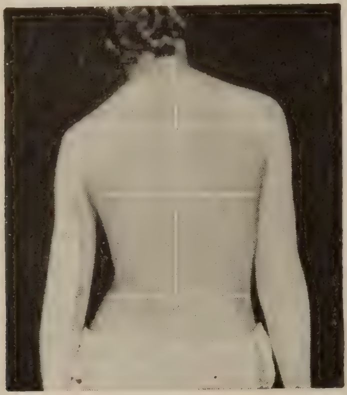

FIG. 6.

Shape of trunk in the "third fundamental posture," viz., standing on left foot with right foot abducted.

posite side. The left shoulder is lower than the right. The left hand accordingly reaches a lower point upon the thigh than does its fellow.

The shoulder lines are unsymmetrical and the vertex drops toward the left shoulder while the chin points toward the opposite side. There is marked loss of symmetry in the two sides of the face, due to the influence of gravitation and unequal muscular activity. Unmodified by defects of sight or hearing, or by a variation in the length of the extremities, the lines of the face always manifest the following deviations from the normal in all cases where this posture has become habitual.

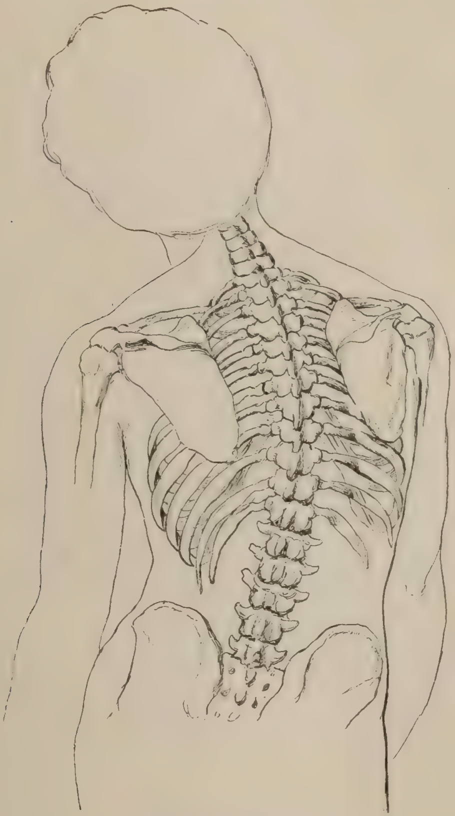

FIG. 7.
Shape of skeleton in "third fundamental posture."

With the head tipped to the left side the angle of the jaw becomes the lowest portion of the face, hence the soft tissues of the cheeks gravitate in that direction, producing a rounded contour on the left side in contrast with the flattened outline of the other side.

The angle of the mouth usually drops a little upon the downward side; sometimes, however, it becomes elevated instead. The median line of the nose frequently inclines to the left as it approaches the tip, and the ala is drawn upward by its levator muscle, shortening the distance between the angle of the nose and the eye, as compared with the corresponding line on the opposite side.

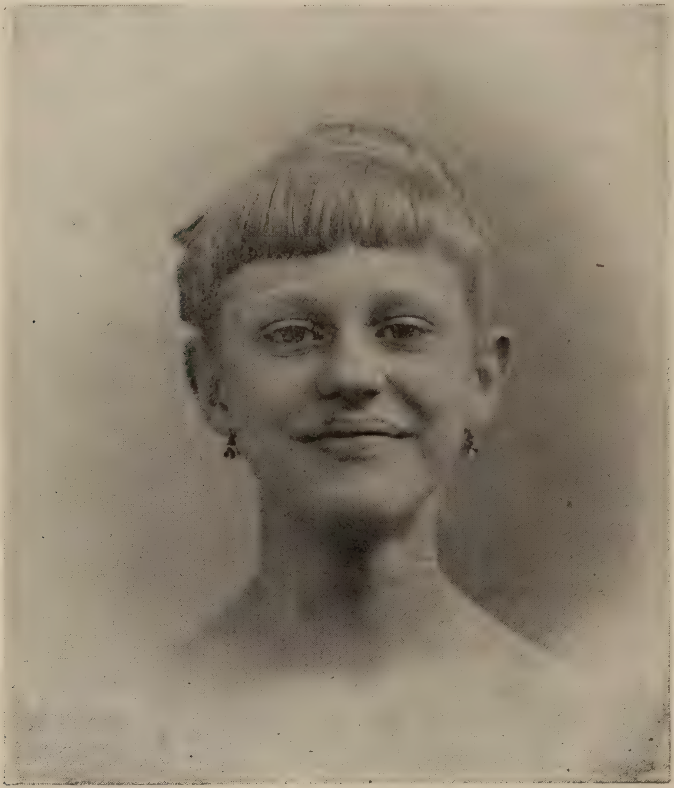

FIG. 8.

Asymmetry of face in girl of fifteen, produced by habitual use of "third fundamental posture," viz., resting on *right* foot with the left abducted. Right eye oval. Left eye linear. Right cheek fold partially erased. Left cheek fold deepened. Tip of nose to right of median line of face. Right nostril dilated. Left nostril flattened. Right angle of mouth lower than left.

The left nostril is dilated and more movable than the right. The septum narium being drawn toward that side below tends to project in the opposite direction above, thus occluding to some extent the cavity of the nose in the region of the right middle turbinated bone. The cheek fold becomes more or less erased on the left (by gravitation of tissue outward), while on the right the same force deepens and elongates it. The left lower lid is pulled slightly downward and outward, increasing the breadth of the opening at the outer canthus. The same tractile force applied to the right eye from the nasal side lengthens or seems to lengthen the opening, at the same time widening the space at the inner canthus, hence the left eye becomes oval and the right linear in well marked cases.

The facial muscles, owing to their insertion into the soft tissue of the cheek and into each other, participate in the changed relation of parts. Because of greater freedom of movement upon the left side the muscles become more mobile than those upon the flattened side. As a result of this they retain their tone, becoming, perhaps, in some cases slightly hypertrophied, while those of the opposite cheek, through disuse, approach the condition which obtains in paraplegia facialis. Lack of symmetry in the two halves of the face has long been observed by artists and photographers, but the casual observer seldom takes note of it until his attention is called especially to the subject.

The changes in the face which I have here pointed out are all produced by carrying the head on the same side, whatever the cause. Most often, however, it occurs as a result of standing and sitting with the trunk tilted to one side. When asymmetry is produced by defective vision the face-lines differ from those described, according to the angle at which the best refraction is obtained.

It will readily be seen that it is important for the general physician, as well as the specialist, to recognize the significance of facial asymmetry in order to utilize it as an aid to diagnosis, as well as to enable him to remedy faulty habits of posture, which, in time, are sure to distort the features.

The neck muscles tell the story of habitual posture more loudly, if possible, than do the lines of the face. Those which are attached to the occipital ridge and basilar process participate most markedly in the changes observed elsewhere. The sterno-cleido-mastoid and trapezius muscles become tense, and limit the bending of the head toward the high shoulder in these cases, so that inspection of these alone, betrays the habitual posture of the head.

The muscles which rotate the face toward the right shoulder, viz.: the left complexus, rectus capitis posticus minor and superior oblique, obtain a greater degree of development than their fellows, hence the greater fulness of the neck, which may be observed upon the left side posteriorly. (This fact may, in some cases, account for the fatigue and pain in this region complained of so frequently by patients who are overworked.)

If the head does not incline toward the left shoulder in an individual who habitually rests on the left leg in the posture described, and there is no defect of vision or hearing, it is safe to conclude that the right leg is short, in which case the head is not needed as ballast. Indeed, if there is a marked difference in the length of the extremities the weight of the head is transferred to the side of the short leg in order to balance the body. The low shoulder and shortened body line are still found upon the supported side. The external skeletal muscles are not the only ones involved in this process of change. The extra ocular groups are, to say the least, placed at a disadvantage in the sidewise posture of the head. The obliques, especially, are forced to do more than their share of the work of rotation of the eyeball. No observations have as yet been made which demonstrate special abnormal conditions thus produced, but it is not unreasonable to include this posture among the causes of incoördination of the extra ocular muscles. That the septum narium is deflected by it more or less in all cases there is no doubt. The prevalence of this habit of posture, coupled with the frequency of occurrence of nasal disease, produced by deflection of the septum, renders the presumption a safe one that the two are related to some extent, as cause and effect.

The pharyngeal muscles participate almost invariably in the general loss of symmetry. Taking origin as they do from the base of the skull, they are so placed in sidewise postures of the head as to work with origin and insertion approximated on the low side, while the opposite condition prevails upon the elevated side. The effect of this is seen in the high and firm palatal arches on the one side as compared with the relaxed and drooping ones on the other. What influence, if any, upon the health of the pharynx the unequal activity thus produced may have, has not been determined so far as I know. It is an interesting fact, however, that in the shape of the interior of the nose and throat we may find an intimation in reference to the habitual posture of the individual.

In a large number of the cases studied there was a demonstrable increase in the size of the chest upon the supported side. This is probably due to several causes, mainly, however, to the position of the scapula, which has its posterior border approximated to the spinal column. Fixed in this attitude by the rhomboidei muscles it places not only the serratus magnus but other respiratory muscles in the best possible attitude for contraction, whereas the opposite condition obtains upon the unsupported side. Here the scapula recedes from the spine, and has its posterior border everted. The rhomboidei muscles are stretched and weakened and the normal direction of the fibres of the serratus magnus is changed.

The rotation of the bodies of the spinal vertebræ to the right interferes also to some extent with the movement of the ribs. It is evident that these influences are capable of diminishing the capacity of the chest on that side. How much such a variation predisposes to disease it would be unwise to premise in the absence of conclusive evidence. It is certain, however, that the diagnostician should be familiar with this variation and its cause. Shortening of the abdominal wall on the supported side by the approximation of the ribs and ilium displace the intestines downward and toward the opposite side. The effect of this upon the already relaxed and lengthened abdominal wall may predispose to the production of hernia.

The pelvic organs of women doubtless undergo more positive injury from this posture than do any others in the body. The uterus is crowded toward the supported side by the displaced intestines. The broad ligament upon the opposite side is placed under tension, which, in time, lengthens and weakens it as a uterine support. At the same time the one upon the elevated side gradually shortens under disuse. The round ligaments suffer in the same way, and the final result is permanent deflection of the uterus and ovaries, whose circulation is interfered with in proportion as the vessels become tortuous upon the side of the shortened tissues.

The more common posture upon the *left* foot is probably more productive of harm than that upon the opposite one, for the reason that it places the uterus and ovaries on the left side of the pelvis in close contact with the rectum, and immediately below the sigmoid flexure. Mechanical pressure, due to an inactive condition of the bowels, is likely to occur as a result of this close contact, especially during the menstrual epoch.

I do not know the microscopic condition of muscles which have become shortened by habitual approximation of their extremities, nor of those which have undergone continuous stretching. The gross effect upon the former is to increase their size, at the same time lessening their elasticity, while the latter become attenuated under the slow lengthening process. Neither condition tends to increase their usefulness; on the contrary the tendency is in the direction of weakness and premature loss of power.

Every occupation presents temptations to the body to acquire a habit of posture which, in time, modifies the shape of the individual. The school-girl, who habitually sits with one elbow supported and head to the opposite side, is likely to acquire the body shape which I have described in connection with a right or left abducted leg. The carrying of her books upon the left arm, as is the habit of girls, tends to modify or increase the lateral curvature produced by sitting and standing. The woman who sews by hand acquires a low right shoulder; while the one who habitually uses a machine, upon which both arms rest, tends to become high-shouldered with symmetrical body lines. The man who stands at a desk with arms supported, in time, assumes the same shape. The sailor, who climbs the masts, acquires a similar shape, although in a different way. The man of letters, with head forward and chin depressed, elongates his cervico-occipital muscles, so that at middle life we recognize him without difficulty. The drug and dry goods clerk, if right-handed, works with left foot thrown to the side and body to the right; both arms in front of the hip line. The resultant shape we are all familiar with, if at all observant. The horse-car driver, as he stands with his right hand on the brake and left on the dash-board, acquires a "left foot twist" in accordance with this posture. The truck-driver, who sits with arms forward holding his reins, is a characteristic figure. The man who digs the street, the brick-layer and the hod-carrier all assume, in time, their own trade-mark.

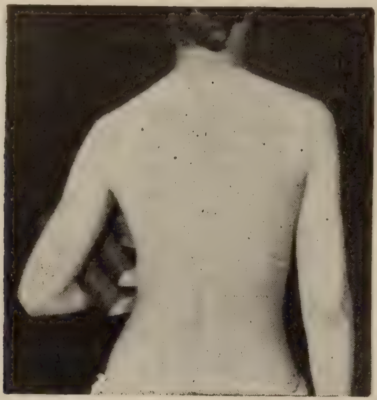

FIG. 9.

So general is the tendency to acquire habits of posture we must accept it as a law of life. What influence it shall have upon the symmetry and health of the body depends upon the posture. Those postures which limit chest expansion, which curve the spine abnormally, which displace the viscera and distort the features, cannot be otherwise than harmful in themselves, although the body is long suffering, and, if allowed sufficient time, adapts itself as far as possible, to unhealthful conditions.

To recapitulate : There are three fundamental postures in which the body in the upright equilibrates. A certain amount of muscular force is required to retain it in any of these positions. The first posture is not practicable as an habitual one, because it does not admit of alternation in the use of the lower extremities. The second places the body in the most symmetrical attitude it can take, and at the same time permit the alternate use of its supports. This is a posture not naturally chosen, but easily acquired by training. The third, which is the favorite posture of mankind, is harmful in its tendencies, both as regards its influence upon the symmetry of the body and the economic and healthful use of its complex machinery. Its adoption then should be deprecated, and especially so in our schools and stores.

The shape of the body in the sitting posture is greatly dependent upon the position of the arms and head. The one which best maintains the symmetry of the trunk, and therefore is most healthful, is that in which the spinal column balances upon the pelvis with the arms at the sides and the head upright. This posture is the one which the body should be trained to assume in the schoolroom, the workshop and the carriage.

DISCUSSION.

Dr. Wight:—In the first place I desire to thank the author of the paper for the excellent manner in which the subject for discussion has been presented to the society. A subject of more importance could not be brought before us; and there is none of more general interest, none more suggestive of advantage to our patients, none which has a more extensive bearing on preventive medicine.

For many years my attention has been drawn to the question of asymmetry, to the subject of deformity, to the results of injury. I have lectured and written on asymmetry, deformity and injury, and I have pointed out some of the relations of asymmetry to surgical practice. In the meantime I have made a careful study of the static and kinetic relations of the voluntary muscles to the bones, showing how motion is gained by the expenditure of muscular force, demonstrating the magnitude of the retentive and displacing components of various muscles which span the joints, and pointing out the great strength and resistance of the cancellous structure of the ends of the bones.

Dr. Mosher's paper has brought to my mind certain suggestions which I may offer as briefly as possible. In the formation of the body there seems to be an effort to make it as symmetrical as we could wish, but the effort, as we know, very often fails for some reason or other. Let me not be understood as saying that any body is perfectly symmetrical; nor would I like to say exactly where asymmetry ceases to be only asymmetry and becomes deformity; nor would I hope to embody in a few words of discussion all the causes of asymmetry and deformity. Yet here I am led to reflect on the normal antagonism going on between gravic force and muscular force. The weight of the body is ceaselessly tending to bring it to rest; it ever opposes the efforts of the contracting muscles; the muscles of the body are making repeated attempts to move it in one way or another, or to lift it and keep it in the upright attitude. How evenly these contending forces are balanced at times, and how unevenly at other times, is well known to every thorough student of the subject.

In regard to the question of variation as related to asymmetry and deformity, I have often reasoned as follows: I am not prepared to say why one member of a family grows tall and another grows short; why one race has certain characteristics, and why another race has characteristics that are different. I am not quite ready to explain why the left thigh-bone is so often longer than the right; I have difficulty in understanding the asymmetry of the skull, which so frequently amounts to a deformity. If I understood the origin, the history, and the biogenesis of man, and could decipher the secrets of his entire environment, I might hazard a more definite opinion on a subject which is one of the most difficult I ever approached.

Yet there are, as the author of the paper has shown, many things of which we have a knowledge that is quite accurate. Let me illustrate: I have seen cases in which the knee-pans were so small as to produce a disabled walk, and yet I could not tell what made the knee-pans so small. I have seen cases in which the tibial arteries were so small as to cause the corresponding foot to be much smaller than the other, and yet I could not find any cause for the small size of the arteries. More than once have I seen one eye larger than the other, and I could no more explain it than I could tell why the branches on one side of a tree grew more vigorously than those on the other side; yet I do know that the branches of trees grow most plentifully in the direction of the prevailing winds.

On the other hand, I have noted the following facts: A young girl has been compelled to carry for a long time heavy weights with one arm, and so has become permanently deformed. A school-boy habitually sat with one arm resting upon his desk for the purpose of study, and in time incurable deformity resulted. A pleurisy in childhood has destroyed one lung, and the side on which it occurred has contracted and the other has greatly expanded, causing rotary curvature of the spine. A boy has imperfectly nourished bones and the muscular action, normal and convulsive, bends them nearly to a right angle, carrying asymmetry to the extent of unsightly deformity. A sickly school-girl has yielding, non-resisting, vertebral bodies, making it possible for the superincumbent weight of the body to bend and twist the spine. In old age the neck of one thigh-bone may suffer from fatty degeneration and slowly become deformed, producing more or less disability. These facts, and others like them, are significant and help to explain to some extent the questions of asymmetry and deformity.

Are we not confronted with the questions of dis-use and ab-use? Are we not called upon to point out the way to make a normal use of our bodies? And are we not called upon to advise in regard to the normal and proper supply of food to enable the body to be used in the right and symmetrical way? I was on the point of exclaiming, How great is Preventive Practice!

Let us open a few more ways that lead into the field of deformity. Let us illustrate the question of dis-use and that of ab-use: Examine the head of the little crustacean, whose ancestors have inhabited the dark abode of the Mammoth Cave for centuries. You will first think it has eyes to see. Externally it has the form of eyes. Incise the points that so much resemble eyes and you will find that the nerve-structure which conveys the motions of light has degenerated into an insensible fibre. All the powers of the sunbeam cannot awaken these dumb organs to a sense of vision.

Examine a man whose ancestors have lived for a few generations in the low places of a great city. The light of the sun does not penetrate his abode; the pure air of the sea and hills is a stranger there; food and drink full of micro-organisms are all he has for his hunger and thirst; his raiment shows accumulated dirt and filth; the accidents of an unhappy environment beat him into moral, mental, and physical asymmetry and deformity.

If any one from want of knowledge, from indolence, or from any other cause, neglects to use a muscle until its special function has been much impaired and it has for the most part become a ligament, it may have passed beyond the possibility of restoration; it may have passed toward the condition of the crustacean's eyes referred to as living in darkness. If a muscle is not used it tends to perish as a muscle; if a joint is not used it tends to anchylosis. Structure and function appear to have been born on the same day; they are twins. Mutilate one and the other suffers. Perfect function must have complete structure to work in.

In this place I am reminded of the fact that I have often seen school-girls carry their books clasped with the left arm, and pressing almost directly upon the left breast. The persistency of this practice has caused the absorption of the left breast to a greater or lesser extent, and so it has become smaller than the right. I do not doubt that the effect of this change has impaired the power of the breast to perform its special function. In some instances I have taken the liberty to suggest to mothers the propriety and advantage of having their daughters abandon this practice.

And then we sit by, we do not even stand, and look upon the most deplorable deformities of the feet of our girls and women, without having the courage to utter a word against the inhuman and revolting arts of the contriver and maker of foot-garments which mutilate instead of protect. I know of no more unhappy disaster that could befall the unfortunate than deformation of the feet.

Here I am reminded of the deformities that have been made among alien races, for special purposes, and without any good reason. They may not have known any better way, but of a truth we ought to be above such practices. The highest art is that which holds to the lines and forms of nature's tracing and shaping.

There is no doubt that special occupations and special amusements will tend to develop and enlarge certain muscles, leaving certain other muscles in a state of atrophy and weakness. Baseball, tennis, and bicycle riding may be cited as illustrations of amusements which cause unequal development of the muscles. The question of occupation is so familiar to all that examples need not now be given of its causing asymmetry and deformity. The author of the paper has pointed out some of the bends and twists of various parts of the body that come from the persistence of certain fundamental attitudes. In producing these effects asymmetry of vision and hearing have much to do at times ; and then we come to ask : What makes the eyes and ears asymmetrical? Again, we are reminded of the magnitude and importance of the subject before us. Its principles will be developed in the future when preventive medicine has made its final conquest.

In fine, take the question of asymmetry of function. When we look at it, we may have a more striking contrast than we do in regard to structure. Let a single illustration suffice: How few people are ambidexter; Is not a person who is right-handed suffering from asymmetry? Let us take one who is left-handed, and how soon we notice it.

Dr. Anderson:—The cause of physical education is to be congratulated in having Dr. Mosher interested in the work. As it stands now there are not enough physicians interested in or connected with this business. Basing my opinion upon ten years' experience I do not believe that physical education, which is my profession, should be left to the charge of the laymen. A physician is the one who should oversee it. He should know something of the practical workings of gymnastics; and yet there are only a few doctors who are thoroughly acquainted with both the theory and practice of bodily training.

During the last ten years I have had the privilege of teaching gymnastics to thousands of youths and adults of both sexes, and during this time I have come to the conclusion that it is not wise for even a doctor to try to cover all the ground of physical education. This subject is divided into educational gymnastics, which pertains to the training of scholars; medical gymnastics; and æsthetic gymnastics. I find now that I have more than I can do in paying all of my attention to educational gymnastics. Here in Brooklyn I have about three thousand pupils a week, one-half of whom are school-girls, and it is safe to say that at least two pupils are brought to us every week for special training who are suffering from some spinal defect. It may be a light lateral curve, or a severe case of rotation. We can trace the defect to a bad standing or sitting position, in very many cases, and if you will watch the pupils in our schools you will see that habitually they stand or sit in the positions shown here to-night

Of course, the first treatment is to remove the cause, and then do what we can by gymnastics. You who have had experience in this special part of orthopædic work know how unsatisfactory the training of these cases is. After working for one or two years it is sometimes difficult to see any great improvement in the pupil. We cannot yet say that the physical training of these spinal diseases is scientific, but it does not necessarily follow that it will not be scientific at some future day. We are striving to get at the right side of the subject. We are trying to cure; we are trying to remedy the defects which are common in our schools, which are due to the influences mentioned in the doctor's paper.

Dr. Mosher goes into a field entirely new to me, and I hope she will continue her researches; and let me say that I wish the physicians of Brooklyn would pay more attention to the subject of physical education in this city. New York, Boston, Chicago, St. Louis, and many of the large cities have introduced this work in the public schools. It is a part of their regular curriculum. When the physicians in Brooklyn demand the same work in our schools it will be placed there. Will you not give us the benefit of your influence and education in this profession? Can you not find time to look up the records, or to investigate the interesting theories upon which rational gymnastic training is based? I believe the most sceptical physician here to-night will admit that there is a great deal more in the science of physical education than is generally admitted if he will give a little time to the study.

Dr. W. F. Dudley:—Mr. President, when Dr. Mosher asked me to discuss her theory I hesitated; I hesitated because the theory which she propounded, and the ideas and conclusions at which she arrived were so novel in their nature, that it is difficult to criticise them in the light of any past experience. I have had my attention called to three cases which presented all the features Dr. Mosher has spoken of this evening, and I examined with some attention the condition of the nose and throat in each one of those cases. In the pharynx I found in each case that the pillars of the fauces, anterior and posterior, were drawn markedly towards the side on which the weight of the body rested, presenting a strong concavity towards the median line, and on the opposite side the arch had disappeared, the pillars presenting a straight line running from the superior insertion at the uvula to the inferior insertion at the base of the tongue. In the larynx I could find no definite changes. In the nose, however, there were changes which were obvious. I found that the tip of the nose in each case was turned towards the affected side quite markedly. Mr. Mayo Collier in a paper read before the British Laryngological Society recently said: "I shall make this extraordinary statement to you, and I am prepared to prove it, that an enormous number of cases of deflection of the septum narium are due to paralysis of the external muscles of the nose." The theory hinged on the fact that in paralysis of the external muscles the valve at the anterior entrance of the nostril on the paralyzed side closed, and the other side only was available for respiration. I think Dr. Mosher in her theory has given us a much more possible clue in explanation of this fact. Collier in his very exhaustive paper, besides stating that paralysis of the muscles of the nose leads to a closure of the nostril on the affected side, makes no further reference to the causation of paralysis of the external muscles, or how frequently it occurs, and does not state whether the seventh nerve is paralyzed to its entire extent or in part only.

Now, in each of the cases the nose has been drawn to one side or the other. If you press the tip of the nose ever so gently towards the right, we will say, you will find that on the left side there is no nasal respiration. A very slight turning of the nose to the right will close the left nostril completely at its anterior extremity. Each inspiration drawn through the right nostril will act as an exhaust draught. A very familiar illustration is that of the common spray, in which there are two tubes. By blowing through the air tube we exhaust the air in the fluid tube, and so draw out the fluid. If there is a partial vacuum on the left side of the nose there will be an inequality of pressure exerted on the two sides of the septum which will tend to deviate the septum to the left side. It may not be out of place to state that the septum is composed of three parts. Posteriorly the vomer is a very dense and firm bony structure, and we rarely have deviation there. Superiorly the perpendicular plate of the ethmoid, thinnest at its lower articulation. Anteriorly the anterior cartilage, which is thickest at the anterior extremity and thinnest posteriorly and in the middle portion. Both of these bones and the cartilage unite in the central portion of the septum, this is its weakest part, and any force directed against the septum would tend to cause a deviation at that place. Roughly, the shape of the septum is a parallelogram about three inches high and three inches deep, approximating nine square inches of surface. In the experiment of taking a V-shaped tube, filling the bend with mercury, and placing one end of the tube in the nostril, a deep inspiration will cause the mercury to fall one inch in the distal arm of the tube, and to rise one inch in the proximal arm of the tube. The atmospheric pressure at the sea level will sustain a column of mercury twenty-nine inches high and will represent a pressure of fifteen pounds to the square inch of surface. If, then, at each inspiration we can raise the mercury one inch or lower it, that will represent about one-half pound of pressure—not exactly, but approximately—and if one-half pound of pressure represents one square inch of surface, the nine square inches on the septum would represent a force of between three and four pounds directed against it.

I think this is rather a high estimate, however, possible only during a sudden and deep inspiration. In an ordinary inspiration we might have a pressure directed against the septum at right angles of one-half to two pounds. Certainly the pressure would be towards the left side, and would tend to deviate the septum in that direction.

If you can throw any light whatever, Mr. President, upon the causation of the deviation of the septum, it is well worthy of consideration. In the examination of living subjects deviation of the septum narium occurs in 900 cases out of a thousand cases examined. Morell Mackenzie found that 76 per cent. of 2,100 cases had deviations of the septum. These were all in civilized beings. Savages, or barbarians who lead an out-door life, and are more perfectly developed physically, give us 80 per cent. of normal septum and 20 per cent. of deviated septum. These facts may, I think, be important in their bearing upon Dr. Mosher's subject. I think her theory gives us a new factor in explanation of the ætiology of deviation of the septum narium.

Dr. Lawrence Coffin:—This paper of Dr. Mosher's is extremely interesting and instructive. So far as the eye is concerned, however, it seems to me that faulty postures of the head are often induced by an instinctive effort on the part of the patient to correct a faulty condition of the eye itself rather than *vice versa*. The patient Dr. Mosher has presented well illustrates, as she has stated, the importance of an early recognition of defects of vision, and their correction before the habitual posture of the head shall have produced asymmetry of the face. Dr. Mosher certainly has set us all at work thinking about these things, and I am sure from the variety of the expression to which this paper on posture has given rise, the subject has a wide practical as well as a theoretical bearing.

Dr. Mosher:—I only wish to say in conclusion I hope you all observe that I have advanced no theories in reference to the actual results of these postures—the effect upon the tissues—and I think with you all, that the subject is entirely too new for any one at this time to formulate conclusions in regard to the matter; but I shall be very glad if you will take it home with you and bring out, by observations in your offices and elsewhere, all the facts you can find which have a bearing upon it.

THE LIMITATIONS OF A COMMON SURGICAL PROCEDURE.

BY JOHN C. MacEVITT, M.D.

Read before the Brooklyn Gynæcological Society, February 5, 1892.

Is ultra conservatism in gynæcological surgery becoming the prevalent fad? I have been led to ask this question by reading an article published in the *Medical News*, of Philadelphia, volume lviii, number xx, written by Professor J. M. Baldy, entitled, "Minor Uterine Surgery," in which he advocates almost the entire abolition of a minor surgical operation, one so thoroughly established by the good results achieved, that it seems as if the conservative wave that has been gradually advancing against unnecessary mutilations has caught in its undertow an operation so nearly harmless that it has long ceased to be considered important except for its beneficial issues.

It is well for us to understand, that when a surgeon recognized by virtue of his position as a teacher or specialist, gives dissemination to his views through the medical press, credence is given to them by the general practitioner, and if such deductions are erroneous irretrievable harm is accomplished.

In diseased conditions of the uterus or its appendages, the gynæcologist is admittedly the better therapeutist and operator; if in his hands these therapeutic measures have been found wanting, and surgical ones successful, is it not grievously wrong to indicate a road leading backward rather than forward? These preliminary remarks are pertinent to the subject, when based upon the correctness of my personal ideas in relation to the theories expressed in the article referred to, and may be at variance with others held by members of this society. I will only refer to that portion of the article pertaining to operations upon the cervix uteri, offering my objections to, or concurring with, the deductions formulated as the premises may warrant, as follows:

"The splitting up of the cervix for dysmenorrhœa and sterility has fallen into deserved disuse; all that can be accomplished in that direction can be done with the dilator."

With this statement, I feel there will be general acquiescence, and it is mentioned only to place in stronger light the following:

"Emmet's operation for closure of the cervix should meet with much the same fate, at least in the vast majority of cases."

Of all innovations in modern surgery, without exception, Emmet's operation has brought more happiness to womankind than any other. It has served to render his name as revered and as well known as that of his patriotic ancestor. Its history illumines the paper of gynæcological literature the world over, and places American gynæcology upon a pedestal to which all must bow. At first tardily recognized abroad, it is to-day accepted wherever a scalpel is used. The conditions demanding it are so ably set forth by its author, so exhaustively dilated upon by other eminent specialists, and so well known to all professing a knowledge of gynæcology that reiteration in this paper would be superfluous. The proposition quoted is a broad one and must necessarily be followed by reasons. Are the following sufficient to justify it?

"The only excuse for the number of such operations which are being continually performed is a fear of subsequent cancer."

At the present time there are but few, if any, that dispute the fact, that laceration of the cervix is the most prolific cause of uterine cancer, consequently the fear of its occurrence need not be offered as an excuse for its repair, but its probability a bounden duty upon the surgeon to operate.

"A simple uncomplicated cervical tear causes no more trouble or inconvenience to the patient than does a woman's ear which has been torn through by her ear-ring; the ear would be repaired for cosmetic effect; the cervix is hidden from view and that factor would not come into consideration."

The question here arises, what is meant by a simple uncomplicated cervical tear. Its meaning certainly appears plain enough, but might we not as well speak of a simple uncomplicated vesico-vaginal fistula; have we not in both cases the integrity of an organ destroyed, its economy interfered with, adventitious products formed and constitutional sequelæ. The cervical and aural simile savors of the extravagant. One is a factor in Nature's greatest phenomena liberally endowed with cerebro-spinal and sympathetic nerve filaments prone to reflex neuroses, always functionally active and suspended in a cavity subject to various discharges, and in almost constant attrition; the other, an addendum to an appendage. We admit the analogy of the tear; the comparison otherwise is imaginary.

"Most women have laceration of the cervix of a more or less degree."

Willingly admitted.

"If the lips are thickened, everted or eroded, they will need treatment."

Self evident.

"Oftentimes simple scarification followed by the application of iodine and glycerine tampons will reduce this condition and leave a clean, healthy tear."

I have had nine years' experience in hospital and dispensary practice, under the best of tutelage, and make the open confession that I have found a complete cure the proverbial exception when the above-mentioned conditions were treated medicinally. I have time and time again thought I had secured a clean, healthy surface that would remain so permanently, only to find the patient returning in a few weeks or months, showing a return of the old symptoms and conditions. It is hardly to be expected that we can secure an epithelial covering to the lacerated muscular tissue exposed in the rent, but rather fibrous or scar tissue with its tendency to reflexes.

"If the lips cannot be brought into a healthy condition, or if the uterus is subinvoluted, or the endometrium diseased, the case may resolve itself into an operative one, but even here a trial with electricity will not often disappoint the surgeon."

The doctor here so strongly intrenches himself behind the subjunctive mood that we are left in doubt whether or not under the designated condition the operation is justifiable. With electricity in the treatment of such cases I have had no experience, and hope the discussion will reveal its positive or negative value.

"In my practice it is rare to see a lacerated cervix which calls for repair."

A courageous statement, but only in keeping with the views already expressed regarding the conditions in his opinion requiring an operation, and in which I believe he stands defiantly alone. In this connection it may be well to quote Dr. Emmet: "I would state that in every instance where the condition is evident, and where enlargement of the uterus still remains, or where the woman suffers from neuralgia, I consider an operation necessary notwithstanding the parts have completely healed."

"Cases which have come to me from other men who have advised an operation get well without. Oftentimes the symptoms for which the operation was proposed, were found to be due not to the torn cervix at all, but to other trouble, principally constitutional."

Women with torn cervices are not exempt from other ills, but a differential diagnosis between the chain of symptoms, objective and subjective, of a cervical tear, and constitutional dyscrasia is easily made. Certainly, specific diseases or loss of bodily tone will respond to proper therapeutic measures in the majority of cases even with torn cervices, but why leave a nidus for future trouble?

"It is the easiest thing in the world to relight a pelvic inflammation whilst repairing a cervix, and I have seen this result follow such practices only too often."

This is the only seemingly valid objection to the operation offered and this one has but slight justification in fact. I will venture the assertion that in the majority of the cases of trachelorrhaphy followed by peritonitis, the previous history of the patient was not taken, or if taken, ignored for want of proper appreciation, and that there was a want of proper examination of the pelvic viscera immediately preceding the operation. How many times have you not seen cases sent in for operation which, upon examination, revealed old pelvic adhesions or recent inflammatory products, rendering the operation at the time criminal. Proper care is requisite here as in all other operations, and simply because you find the cervix torn is no reason why you should repair it at sight. When the operation was first brought to the notice of the profession, I have no doubt theoretical objections were made, but it has now stood the test of years, and its advisability is beyond successful dispute. Admitting, however, for argument sake, that the claim of topical dressings will leave a clean, healthy tear, and that after such is obtained the pathological conditions and general symptoms disappear, which is the better? which is the more just to our patients? submit them to daily, tri- or weekly applications, causing loss of time, great inconvenience, discomfort, and pecuniary loss, with a problematical result, or a painless operation lasting from twenty to thirty minutes, with eight or nine days painless rest in bed.

In general practice I find that frequent abortion where this condition exists, and its prevention by remedying the evil a source of elation to both physician and patient. Paradoxical as it may appear sterility is cured by the same condition.

Gonorrhœa is, so it is claimed, a productive cause of pyosalpinx, the gonococcus migrating from the vagina to the Fallopian tubes. I have never heard the theory advanced, but I believe the raw exposed lacerated tissue is a most frequent factor in uterine infection.

It may appear to you that the radical views of Doctor Baldy will fail to enlist sympathy, but when you take into consideration that the gynæcological chair is the first article of office furniture that the recent graduate in medicine purchases the doctrine of topical application to lacerated cervices will lead to quackery, misery and death.

DISCUSSION.

Dr. Chase:—Mr. President, I presume the deductions from the paper read will be pretty generally accepted by the gentlemen present. I should class the author, whose quotations the writer has used, among those who should be styled abdominal surgeons, not gynæcologists.

It seems to me, Mr. President, after some years of observation, that it does not take a great while to arrive at a just conclusion with regard to the influence of cervical laceration. To assume that all cases should be operated on would be entirely wrong, probably the majority of cases require no operative treatment; but with a cervical laceration attended with subinvolution, with hyperplasia, and there is disease of the Nabothian glands, and an area of raw surface appears, I think the common experience is, that the patient is greatly relieved by local treatment. I remember in my early experience I treated cases of that kind. I did not know exactly what the condition was, but my patient in the course of one to three months went away, as she supposed, cured, and I congratulated myself she was cured, but she came back again as bad as ever, and I resorted to the same method of treatment, and history then repeated itself. Nothing short of the restoration of the parts was followed by permanent relief.

There was a single suggestion made by the writer of this article, that perhaps one of the causes of difficulty in this connection was from septic absorption from the eroded cervix, and that was the point which was brought out in a short paper by Dr. Graily Hewett, of London, which I read before the Medical Society of the State of New York, at its last meeting. Dr. Hewett mentions the influence of septic absorption in keeping up the diseased conditions.

Regarding the advantage to be obtained from operation in proper cases, I think there is no doubt whatever. A train of symptoms which you are all familiar with, are, as a rule, wholly or considerably relieved, and I can recall in my own experience but a single case in which the results were not satisfactory, where the relief anticipated was not obtained, and that might have been due to some error on my part in not removing enough of the cicatricial tissue. The seeming allegation in the minds of some against this operation I think must be the outgrowth either of a want of observation, or prejudice. It is a well-known fact that Lawson Tait, of England, practically ignores this condition, while Graily Hewett, and others of eminence recognize the utility and necessity of plastic restoration.

Dr. Jewett:—In the matter of the treatment of laceration of the cervix, the ground has been well covered. It is no doubt the case that the systemic effects depend on the secondary mischief that develops in the cervix more than the mere fact of laceration alone, and that the treatment is to be governed accordingly. It is true these secondary conditions may often be relieved by local applications; but as the last speaker has said, they very soon return. The laceration will seem shallower when the eversion has disappeared and the diseased condition of the cervix has been relieved, and deeper again when it returns.

Subinvolution is almost always present in deep lacerations of the cervix, and that is a condition that is not in my experience materially benefited by electricity. The curette does much more than the current, and curetting, I assume, is generally combined at the present day with repair of the laceration.

Dr. F. Baldwin:—The question arises in my mind as to just how far we should allow the presence of induration due to past inflammation to keep us from an operation of that kind. I saw a patient to-day in whom there is evidently the remains of a past inflammatory condition in the pelvis with considerable induration, but it is so evident to me that the woman is suffering from the results of a laceration that I shall operate in a few days unless I see very good reasons for not doing so.

Dr. Jewett:—I would like to ask Dr. Chase if I understood Dr. Hewett's views in regard to the evils that come from sepsis in these cases—that it does mischief by invading the corporeal endometrium. It is easy to believe that infection is frequently carried from the cervix to the uterine cavity by the uncleanly use of the sound, but not by simple extension.

Dr. Chase:—I cannot recall in the brief statement which I received from Dr. Hewett, his views as to the *rôle* sepsis plays under these conditions except as one of the factors present in these lacerations.

Dr. Skene:—There are one or two points which I would like to refer to. First, in reference to the few men in the world who know anything about gynæcology who have anything to say against restoration of the cervix when it is injured. When we look at it from the standpoint of the surgeon, not any special surgeon, but a man well grounded in the principles of surgery, we strike first of all the great surgical principle: namely, that wherever there is an injury or deformity, restore the one and overcome the other just as promptly and as effectually as you can. There is no exception to that rule. As for the arguments that were brought up by Dr. Baldy, based upon the objections raised by Lawson Tait, it does seem that Lawson Tait is sure to be sustained in all his wise and unwise statements by a few men in this country. There is a statement (which I think I can quote correctly, in fact, if not in language) in Lawson Tait's book, and that is, that this laceration of the cervix spoken of by Dr. Emmet, is simply a piece of American nonsense, or something to that effect, and then adds, that the whole trouble is the subinvolution as pointed out by Sir James Simpson. Lawson Tait always quotes one authority—Sir James Simpson. Perhaps he has every reason for that, but the statement when I read it reminded me of a celebrated bookbinder, one noted for his proficiency in that branch of handicraft, who was exhibiting to a friend some choice specimens of his bookbinding. The gentleman complimented him very highly, and he appreciated the compliment far enough to say: "I tell you what it is, sir, any fellow can write a book, the binding is the thing." Lawson Tait would know, if he knew anything about the subject, that nineteen out of every twenty cases of subinvolution are due to laceration of the cervix or perinæum, or both, and the easiest and quickest way to cure subinvolution is to repair the laceration. So it is hardly worth while to say anything about it, for we are very much in advance of him in that branch of surgery. This Dr. Baldy evidently seems to have caught the inspiration from Lawson Tait and so abuses this operation.

I need not add a single word to what Dr. MacEvitt has said about Emmet's contribution to the science and art of surgery in this connection, except to say that we all must fully and thoroughly agree with him. I do not think any man who has taken time to acquaint himself with that lesion as pointed out by Emmet, and its consequences, and the means by which it can be relieved, can say too much in his praise. If he had never done anything else since he practiced surgery or medicine that alone would have entitled him to a monument as high as any in this country, and if not given to him by the medical profession, by the women who have been saved from suffering through him.

In regard to this question brought up by Dr. Chase, as contained in Dr. Hewett's paper, I am free to confess that I have not given that subject the consideration in the past that I know it deserves. As I understand it, it simply amounts to this: that one of the dangers arising from laceration of the cervix is that it exposes the patient to auto-infection, and renders her far more liable to extrinsic contamination; in other words, a patient who has a lacerated cervix and all the pathological conditions which follow, as a result of this laceration, is much more liable to have endometritis and salpingitis. A woman with a lacerated cervix is more likely if she is exposed to gonorrhœa to have it extend to the uterus and tubes. Is that your understanding, Dr. Chase?

Dr. Chase:—As before stated, I am unable to recollect at this moment what Dr. Hewett's opinion is in that particular, for the reason that he simply alludes to it, but the impression I have is that the trouble was from direct absorption that kept up the endocervicitis.

Dr. Skene:—From talking with Dr. Hewett on that subject, and similar subjects (and he is by far the best authority on all such subjects in England), I understood not that there was so much danger from absorption from the diseased portion of the cervix, as there was danger of the extension of the disease; that a laceration of the cervix being the primary injury, you get all the rest of the difficulties which follow suppurative degeneration, and that that is not so liable to be absorbed and cause immediately (I mean after recovery from the immediate lesion) cellulitis or peritonitis, as it is likely to extend to the endometrium, and hence to the tubes. I think, that is as I have observed it, that they are more liable in time to have endometritis and tubal trouble even if there is no exposure to any special influence, and if they are exposed to special infection they are much more liable to have endometritis and salpingitis.

Dr. Jewett:—The possibility that the corporeal endometrium may become septic by extension from the cervix must be admitted, yet the occurrence it would seem must be rare. Bacteriologists tell us that the cavum uteri in health contains no micro-organisms, while the cervix is the habitat of certain bacteria. The os internum is a gateway, which ordinarily, they do not pass. True, the ordinary genital germs are comparatively inactive, and the kind of germs which obtain in cervical disease may more easily invade the endometrium of the body. We know that an endometritis usually leads to a salpingitis, but this is possibly explained as the natural consequence of the periodical contractions of the uterus forcing its contents into the tubes. It is not easy to understand why septic disease of the cervical mucosa should frequently invade that of the body. This, however, is theory, and the views of the Chair are based on more substantial grounds.

Dr. Skene:—When I began to practice gynæcology, I was taught that the whole pathology was congestion. A Ferguson speculum was introduced and the cervix leeched, then scarified, then swabbed over with nitrate of silver, a scruple to the ounce of water, and if that did not bring relief and speedy cure—and that meant treatment six months or a year—then begin and go over with the treatment again. I have seen a good many hundred of those cases, where after this treatment the irritation was relieved, the leucorrhœa cured or arrested, and to a certain extent, some of the constitutional symptoms disposed of, but they invariably came back after a time worse than before, and I am not sure that within the last few years I have not had the privilege of curing some of my former patients, not of the original disease, but of my own treatment in the form of scar tissue that I managed to produce. That is enough to satisfy me that the treatment quoted as being competent is as near scientific nonsense as anything I know of, and I may simply say this, at the present time, thanks to Dr. Emmet, and him only, I am sure that we can do more in the way of getting, not only present, but permanent relief in fifteen or twenty minutes by Emmet's operation, than I used to be able to give my patients in an unlimited length of time. They were patients for all time if they only came as long as they suffered. I do not believe I ever permanently cured a case of that kind in the old way.

In reference to the question of the causation of malignant disease of the cervix, I have never believed that a laceration of the cervix would produce cancer in a typical organism; but if there is the slightest constitutional tendency to malignant disease, I know that laceration of the cervix will determine its appearance in that organ first and infinitely sooner than if that laceration had never occurred, and from my observations I am convinced that laceration is an active agent in producing cancer of the cervix in the way named.

Dr. MacEvitt:—I have only to add that I am much pleased by the discussion which the gentlemen have given the paper.

I had hoped that some of the members would dwell upon the harm of the indiscriminate practice of gynæcology by the general practitioner. I endeavored to emphasize that point in my paper, that if the views of Dr. Baldy gain currency I believe it throws that special department of gynæcology back to the treatment of thirty or forty years ago. At the present day there are practitioners here in Brooklyn who still use the stick of nitrate of silver in the treatment of what they call ulceration of the cervix, and it is almost impossible to go into an office to-day without finding a gynæcological chair there, and all forms of gynæcological practice are conducted by general practitioners.

Another point which I would like to bring out, I will emphasize by reading a few sentences from the paper:

"Gonorrhœa, so it is claimed, is a productive cause of pyosalpinx, the gonococcus migrating from the vagina to the Fallopian tubes. I have never heard this theory advanced, but I believe the raw, exposed, lacerated tissue is a most frequent factor in uterine infection."

I do not think Dr. Hewett mentions the fact of this infection in his work on the Diseases of Women. I believe it to be original with myself, but if it has been suggested before by Dr. Hewett, I am only too happy to know it, and am glad to be in such good company.

Dr. Skene:—I do not believe anything is said on that subject in Graily Hewett's works. It is in this recent article which Dr. Chase received from him, which is not yet two years old, so it would have been impossible for Dr. MacEvitt to have gotten at that unless he had gotten a direct communication from Dr. Hewett as Dr. Chase did. Graily Hewett's books do not represent his views on laceration of the cervix uteri and its treatment as he understands it himself to-day. He has changed his views altogether on that subject, and he is a long way ahead of his book in that respect. At least that is as I remember the matter.

Dr. MADDREN:—I would like to ask if Dr. Noeggerath does not advance that theory?

Dr. SKENE:—He advances the idea, but not in laceration of the cervix uteri.

NARRATION OF CASES.

Dr. SKENE:—I will present the following history of a case that I saw a short time ago. A lady married about five or six months, past history very good, menstruated twice normally after her marriage. It is now a little over three months since she menstruated last. When her menses failed to appear the first time, she called upon her physician, Dr. Richardson, who told her that he thought she was pregnant, but advised her to wait and see if she passed another period, and then call and see him. She did so, and as it was rather important that she should know whether she was pregnant or not, he investigated the case and found she was pregnant beyond a reasonable doubt. She went on well for quite a while, but after a rather unusually hard day's tramping around the city, shopping and calling, she was seized with pain and hæmorrhage. He was called, and found her threatened with a miscarriage. He put her to bed and gave her an anodyne, but in spite of the efforts of himself and the nurse, the miscarriage progressed. On Tuesday he found the ovum protruding from the os externum and removed it, emptied the uterus and washed it out with $^1/_{5000}$ bichloride solution. There was something peculiar about the uterus, being almost all on one side, the left side mostly, that made him doubt the fact that the uterus had been emptied. Before washing out he made an exploration, and as the uterus was well down and could be brought down further by manual pressure, he satisfied himself that the cavity of the uterus was not as large as he expected, and he was positive nothing was left in the cavity. He says he put his finger so near the fundus that nothing could have escaped it. That was on Tuesday. She did perfectly well until this morning, Friday, when they telephoned to him that she had had a chill. He got there perhaps an hour-and-a-half afterwards and found the temperature 103, no offensive discharge, very little discharge of any kind, and not much pain. She had pain, but it was between the shoulders. There was no distention of the abdomen, and he again washed out the uterus, the first time since Tuesday, and at the same time gave her a small dose of phenacetin and remained with her a couple of hours and the temperature came down below 100°. He attributed the reduction of the temperature to the phenacetin, but that may not have had anything to do with it. It seemed as if the washing out had all to do with it, or else the temperature was going to come down anyway. I saw her in the afternoon, her temperature was 99, with a rapid pulse and pain and no distention of the abdomen. The interesting point is this: at his first washing out he discovered she had a double uterus and double vagina. The left side of the double uterus was the one that was pregnant, and the one that he investigated and removed the ovum from; he examined the right side and found, apparently, a nulliparous half of the uterus, the os not at all dilated. He made that discovery on either Tuesday or Wednesday. When I made the examination this afternoon, I found the left side had had a miscarriage, the canal was contracted and there was no discharge of any kind coming from it. On the right side the os had dilated, and I fancied that in the upper portion of the cervical canal I found a body that felt as if it might be another ovum. There was free oozing about like a menstruation from the right side, and also a free leucorrhœal discharge such as we see in the early stages of miscarriage in the early months of pregnancy.

Now the question that I want advice about is this: was she pregnant on the other side also, and if so, the size of the right half of the uterus would suggest to me that if she was pregnant and was miscarrying on the right side, or in the right uterus, if you like, it certainly must have been a pregnancy that occurred after the first on the left side. If it was not, is it possible that the decidua formed on the right side of the uterus the same as occurs in tubal pregnancy, and that she was not having a second miscarriage on the right side, but simply throwing off this decidua. At the time I was unable to satisfy myself that such a thing was either possible or likely.

The question I want to ask is this: if there is a double uterus, and pregnancy occurs on one side, is a decidua formed and thrown off from the other non-pregnant half, the same as in tubal pregnancy in a single uterus?

Dr. Hyde:—Mr. President, if there is a double uterus and double vagina, what is to prevent that woman from menstruating from one side while she is pregnant from the other?

Dr. Skene:—I do not know what prevents it, but it is the rule that they do not. I have seen certainly one patient with a double uterus and double vagina who bore three children in one side of the uterus and never menstruated from the other during her pregnancy. This one certainly did not menstruate, and it remains to be seen whether she is pregnant. We will know, because I begged the doctor to settle the question of what it is that is now in the uterus. I told him that it might prove to be an ovum. That there is something there I am satisfied, for it is an unheard of thing for a nulliparous uterus, and a small one at that, to have the canal dilated so as to admit the finger. One-half of the first joint of my finger could be introduced nicely without effort. That is positive evidence to me that there is something in that uterus; whether it is a decidua or an ovum remains to be seen.

Dr. Hyde:—In any of the cases that you refer to as having seen, did you ever know of the decidua being formed?

Dr. Skene:—No; and that is the very thing that leaves me in the dark and so anxious to know what has been observed in that way. I see no reason why a decidua should not form in the non-pregnant half of a double uterus. I see as much reason why it should form there as in tubal pregnancy, which we know is the rule. I think in all cases of tubal pregnancy there is a decidua not only formed but thrown off, and it is not the decidua of membranous dysmenorrhœa, but the decidua of gestation, that is, it resembles it much more in size, etc.

Dr. Jewett:—Of course time will settle the question, but I think development of the decidua in the non-pregnant half of the uterus is inevitable. We know that decidual development is the rule in tubal pregnancy, and in the case before us the relation between the pregnant point and the non-pregnant is more intimate than that of the fruit sac and the uterus in ectopic gestation. I do not know of any reported cases, but the fact must be the growth of a decidua entirely analogous to that found in tubal pregnancy.

Dr. Skene:—It seemed to me to be the natural outcome, and yet in the history of this one case that I have in mind, while there was undoubtedly a decidua formed there, there was no history of its being thrown off about the time when it usually is, the end of the third month or thereabouts, although it might have been thrown off at the time of parturition without its being known.

There is one peculiarity here in this case which I have never seen, so well marked at any rate, and that is, that the division was perfect, both sides of the vagina being as nearly alike as could be in capacity, etc., the septum seemed to be an equal division of the vagina, and also of the uterus, so far as I could make out. Of course before this ovum was thrown off from the left side the doctor found that side the largest, and he found out afterwards that that was what gave the uterus its appearance of being one-sided, but to-night in my examination or external manipulation, it seemed to be a pretty uniform sort of uterus. In all the cases of double uterus and vagina that I have seen, one side has been more developed than the other. Of course that was markedly so in this lady who bore three children on one side and came to me for an endometritis on that side, and I found a nulliparous vagina and cervix on the other side. So marked was the condition that although she had been attended in her three confinements by three different physicians, she was not aware of any malformation until I called her attention to it. I can readily see how her former attendants failed to discover it, because the septum was so far to one side that on digital examination, unless you really knew what to look for the smaller vagina never would have been found. It was only on speculum examination that I happened to notice the other vagina.

Dr. Chase:—I would like permission to ask a single question: whether the husband has been interrogated regarding the situation.

Dr. Skene:—I infer that he has been blissfully unconscious, and from the fact of the development of both sides of the vagina, I could see how it might be possible for a second pregnancy to occur after the first. In other words, in making an examination you are just as likely to reach one side of the vagina as the other. The lower portion of the septum is just within the vulva, the septum is lax, and a little care is necessary in order to ascertain in making repeated examinations of the two in comparing them in which side the examining finger is, so there are no mechanical conditions to prevent gestation occurring on either side, but it is still a question whether that is likely or not. I have learned since from Dr. Richardson that she did not have an ovum on the right side and did not expel a decidua, so far as he could ascertain until a month after her miscarriage at which time she expelled some membranous shreds which he presumed to be decidua.

Dr. Jewett related a case of sudden death after labor. He said the patient was in her third confinement, about twenty-seven years of age, and in good general health. She had been under great mental anxiety for several weeks, and yet I am not sure that this fact had anything to do with the result. The labor was a perfectly natural labor of not much over twelve hours. The child was larger than the average. The only interference required was the use of chloroform which was given by the nurse under my guidance, and the total quantity, as appeared from inspection of the bottle after the birth, did not exceed a half ounce. It was given in the usual obstetric fashion, except at the perineal stage, when for about five minutes it was pushed to the surgical degree.

The patient rallied promptly from the chloroform, but within a few minutes she fell into what appeared to be a syncopal attack, and her condition became alarming; but after a hypodermic injection of digitalis and nitro-glycerine, the action of the heart improved. I had learned from the patient directly after the birth, that she had had an adherent placenta in two previous confinements. I took no notice of this as it is so common a mistake, but I subsequently found that the placenta was in fact abnormally adherent. During the time immediately preceding the supposed syncopal attack, I had made one or two applications of Credé's method. A recent paper in the *Edinburgh Medical Journal* alludes to the danger of inducing shock or collapse by pressure upon the ovaries in the unguarded use of Credé's compression, but I do not think I did that.

The placenta did not yield in the least, and at the end of about two hours (after the patient had rallied under the use of the cardiac stimulants), I separated the placenta with my hand and removed it. I found it adherent as far as I could discover nearly over the entire surface. A short time after I had begun operations on the placenta, the woman was again seized with a worse attack than the first, her complexion was ashy and she became partially unconscious. Later she complained of dyspnœa, but there was no vomiting as is usual in such cases. She became extremely restless, complained of violent lumbar pain, and died within less than three hours after the birth of the child. My theory is that death was caused by pulmonary thrombosis. The question arises, was it a spontaneous thrombosis, or the result of embolism? The first seizure occurred before I attacked the placenta. Had it occurred during my interference I should have thought embolism was the cause. This is the fourth case of the kind that I recall. In two of them there had been prolonged hæmorrhage. In one, placenta prævia had been treated by a physician who carried the case along for two months or more with the use of occasional pledgets of cotton in the vagina, the hæmorrhage being more or less profuse during that length of time.

In another case, the patient had been in process of abortion for several weeks, and during that time was walking about the streets and constantly bleeding. I emptied the uterus, and within a short time after the woman developed a pulmonary thrombosis and died in a few hours.

The question suggests itself—is a long-continued hæmorrhage more likely to result in thrombosis than an acute hæmorrhage? Another question is the possible bearing of chloroform on such an accident as this. It is reasonable to presume that the slowing up of the circulation under chloroform may favor the formation of thrombosis.

Dr. Skene:—I can add an item to one of the questions by way of answering it in part. The influence of hæmorrhage and deterioration of the blood from exhausting discharges as favoring cardiac thrombosis is well recognized. It is a fact that in cases of large ovarian tumors where they have been tapped repeatedly and then operated upon, a sufficient number of them have died of heart-clot to call attention positively to that fact.

In cases of abdominal dropsy, hepatic in origin, which have been tapped repeatedly, many have finally died of heart-clot after any surgical operation, and I look upon these cases as surgical to that extent. I suppose every parturient patient is, to a certain extent, a surgical case, there are some surgical conditions present—anæmia from prolonged hæmorrhage or large serous discharges, as in ovarian dropsy and abdominal dropsy, and there is no doubt that there is heart-clot under conditions making an extra tax upon the heart and circulation. As to how far the chloroform has any influence I am unable to say.

Dr. Chase:—As related to this topic under discussion, I am glad to have the testimony that there is such a thing as adherent placenta. Nowadays it is rather common to hear men declare that they do not believe there is any such thing, and that it is a very easy matter to deliver any placenta by Credé's method. It has been my experience, perhaps common with others, to see a goodly number of retained and adherent placentæ, so that manual effort was required to separate them, and testimony coming from such a source will tend to disabuse the minds of some gentlemen that there is no such thing as adherent placenta.

Dr. MacEvitt:—To verify the assertions of Dr. Jewett and Dr. Chase, I would like to mention the case of a woman I attended upon two occasions where there was adherent placenta, and in proof of that there was phosphatic degeneration of a portion of the placental site, which I picked away in small pieces with my fingers. This phosphatic deposit was in the meshes of the portion of the placenta that I removed, which is *prima facie* evidence that there were intimate adhesions there.

Dr. Skene:—Twelve days ago I saw a lady sent to me from the northern part of the state (by Dr. Farnham), aged forty-seven, had

had a number of children; past history first-rate. Three months ago she began to have hæmaturia, and the quantity of urine passed was much beyond the normal, and appeared to be one-half blood. This continued for three months with only a few days exception, when about six weeks ago it pretty nearly cleared up. The doctor tried washing the bladder, gave gallic acid, ergot, etc.

When she came to me I tried to determine whether the blood came from the bladder or the kidneys. She had no symptoms; she urinated two or three times in twenty-four hours without pain. There was retention of urine for a time, some weeks ago, which was caused by a blood-clot and was relieved by catheterization.

There was no irritation of the bladder, no tenderness or pain in the region of the kidney or ureter, and examination of the urine gave no evidence of any disease of the kidney. I felt satisfied that the blood came from the bladder, as it was not so much mixed with the urine as when it comes from the kidneys in a moderate quantity.

By bimanual examination I thought I excluded stone, or if there was one it was small. There were no products of inflammation in the urine. I was unable to find any growth by the bimanual touch by which I have frequently found neoplasms in the bladder in favorable cases. I was entirely unable to make a diagnosis, so I advised the patient to remain with me a few days, and I then set to work to stop the bleeding from the bladder. I found that a mild solution—half an ounce to the quart—of ordinary vinegar, using one or two quarts at a time, introducing four or five ounces and douching the bladder, stopped the bleeding. On the third day after this treatment, I distended the bladder with four to six ounces of clear water, and then with the endoscope I was able to rake out a papillomatous growth—an epithelioma—about the size and not unlike in shape of a carnation, and about as brilliant in color when I first saw it; parts of it seemed stained or shrivelled from the use of the acetic acid, and here and there were deposits of urine salts. I invited the doctor who came on, and a week ago yesterday I opened the bladder by a vaginal cystotomy, and was able to pass a finger up to the mass, and then using Hunter's depressor, which is the best scoop made, I was able to bring it out through the fistula and clamp it, including in the clamp probably one-eighth of an inch of the mucous membrane, and then cut the entire mass off with the cautery, and then just heating the clamp enough so that it would desiccate the portion held in its grasp. I then let it go, washed the bladder out, and closed the fistula with silk, and I think I may say to-day she is perfectly well; there is no hæmorrhage, the fistula has healed, and there is no pain. There is only a slight irritation of the urethra on urination.

I thought at first, because the growth was lying pretty well down, that it was at the entrance of one of the ureters, but with the finger in the bladder I found that it was three-fourths of an inch higher up, somewhat pedunculated, spreading out as we see the same growth from the cervix, somewhat greater than its base.

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ERUPTIO ÆSTIVALIS BULLOSA.

BY GEORGE D. HOLSTEN, M.D.

Hutchinson (Clin. Soc. Trans., vol. xxii.) described under the title "Eruptio Æstivalis," an eruption occurring on exposed portions of the body—face, hands—characterized by the formation of small isolated vesicles, followed by crusts, loss of substance, and white, variola-like scars; appearing in spring or early summer, and due to exposure to sunlight. He had previously reported fourteen similar cases in his lectures on Clinical Surgery, under the designation "Summer Prurigo. Prurigo æstivalis, seu Prurigo adolescentium, seu Acne prurigo"

Hanford (Illustrated Medical News, October, 1889) reported a similar eruption occurring in a boy whose first attack was in his second year, recurring subsequently every following year, usually in April, and lasting until August; and Jamison (Lancet, 1889) added another to the list of a similar eruption due to the same cause.

This disease was first described by Bazin (Cours de Sémiotique cutanée), under the title of "Hydroa Vacciniformis." Bazin says it is a rare and but little known disease, often mistaken for syphilis or scrofula. Beginning after exposure to fresh air or strong sunlight, as red spots on which herpetic-like vesicles form, on the second day they become umbilicated and turbid, and resemble a variola or varicella pustule. Crusts then form, which, after falling off, leave deep scars. Itching or burning is absent. In some cases the crusts become thick, then resembling impetigo. Relapses are frequent.

Carl Berliner (Monats f. prak. Derm., vol. xi., Nos. 10 and 11) describes another case, tabulating those previously reported, making, with his one, eighteen in all, and divides them into two classes, erup. æst. bullosa, and erup. æst. pruriginosa, the former being seen on the tender and susceptible skin of children, and the difference between the two being only one of degree.

Theo. Buri (Monats. f. prak. Derm., September 1, 1891) reports a similar eruption, where the diagnosis was confirmed by Unna. The patient—a six year old girl—had her first attack at the age of two years. It recurred every spring, and lasted usually from four to six weeks. Present attack began after exposure to a bright April sun, by the formation, on the bridge of the nose, of small vesicles, which ruptured the same day; the following day similar vesicles appeared on cheeks, interspersed with small "prickles." Patient presented variola-like scars from former attacks, and variola-like efflorescences, with crusts on hands and face. Removal of crusts showed a red, moist, slightly suppurating, sharply defined excoriation. Scars were white, small, and superficial. Buri did not see the eruption from the beginning, but such lesions as he observed began as small papules in the skin, which rapidly grew in size; the centre became transparent, while the remainder gradually became deeply brown. A crust formed, on removal of which loss of substance was seen, and a variola-like scar subsequently was left.

Buri calls attention to the following points in diagnosis: Beginning in childhood; predilection for exposed portions of the body; absence of itching; healing with resultant variola-like scar; appearance in summer, absence in winter; causation, sun's rays.

Buri suggests the addition of "vacciniformis" to "eruptio æstivalis," as denoting better the character of the eruption, and as also giving credit to Bazin for the first description of the disease.

A histological examination could not be made, but Buri regards the process as a sharply defined, not infectious, deep inflammation of chemical causation, ending in necrosis. The presence of blood on the under portion of crusts, and the formation of scars, showed that the inflammation extended into the cutis.

T. Broes van Dort (Monats. f. prak. Derm., March 1, 1892) adds another case to the list of a young lady, in whom the eruption occurred every summer for twelve years, and whose appearance was similar to those of the cases mentioned above.

Van Dort diagnoses it from impetigo where the crusts are thicker, more yellow, leaving red spots after removal, and secretion is contagious. In herpes, scars are absent, the lips are often involved, and itching or burning pain is severe. In pemphigus, the blebs are larger, with a raised border, and, after rupture, a raw burn-like appearance is left; not limited to face. He prefers the term "erup. æst. bullosa," as suggested by Berliner, because the scars in his case were superficial, not resembling variola.

The ætiology is then considered. Widmark in 1889 showed that the ultra-violet rays of an intense electric light could produce changes in the skin, and Hammer (On the Influence of Light on the Skin, Berlin, 1892), experimenting with electric and sun light, supports Widmark's views, finding further that a sat. sol. of quin. sulph., or glycerine-quin. oint. gave the best protection against the chemical rays. He also calls attention to the increase of pigment under the influence of sunlight, as being due to light, not heat, for the strong electric light may cause the same phenomena, and that the interception of the ultra-violet rays will protect against erythema solare.

Van Dort considers erythema with scaling of the epidermis and resultant pigment formation as being ætiologically related to Hutchinson's summer eruption; with protection against the sun the process ceases in both. That erythema solare is not alone due to the warm rays is proved, in that in arctic regions, with a temperature under 0°, erythema often occurs, partly from direct sunshine, partly from reflection from the snow, of light rich in ultra-violet rays. Further, erythema solare often occurs under a cloudy sky, when the warm rays are absorbed by the clouds, and, therefore, eliminated.

Erythema caloricum, as a designation for sunburn, is incorrect, and should be dropped from dermatological nomenclature.

DYSTOCHIA FROM IMPACTION OF THE SHOULDERS.

BY J. L. KORTRIGHT, M.D.

Read before the Medical Society of the County of Kings, March 15, 1892.

The topic to be presented forms one of the minor difficulties that beset the accoucheur on his way through the world, and one of the lesser dangers that menace the fœtus on his way into the world. That difficulty of delivering the shoulders after the birth of the head does occasionally occur, all physicians, especially those of largest experience, will admit; and that danger to the fœtus from this cause does exist, the following list of accidents will prove: Rupture of the fibres of the sterno-cleido-mastoid muscle with subsequent abscess of the neck, injury to the brachial plexus followed by temporary paralysis of the arm, fracture of the shaft of the humerus or separation of its epiphysis, cerebral effusion, or asphyxia, with consequent death of the child. Incredible as it may seem, the head of the child has been torn off in endeavors to deliver the trunk when the shoulders have become impacted.

In ordinary labor, after the expulsion of the head, there is rest for a few seconds followed by turning of the fœtal face toward one or the other of the thighs of the mother. A movement of advance begins and the child is extruded in the antero-posterior diameter of the pelvis. First one shoulder appears and then the other followed by the trunk, the knees, the pelvis and the feet. If the maternal pelvis be large, if the child be small, or if the pains be strong, no restitution takes place, and the shoulders appear in the transverse or oblique diameter. Regarding which shoulder is born first, the anterior or posterior, authorities differ. The truth of the matter seems to be this: If the delivery be left entirely to nature, the anterior shoulder slips out first in ninety per cent. of the cases. If, however, the head be lifted from the bed and we endeavor to make the delivery slow and gentle, the posterior shoulder appears first in the great majority of the cases.

I have given above the external phenomena of ordinary births of which the internal mechanism is as follows: Restitution is caused by the child's shoulders engaging in the oblique pelvic diameter opposite to that in which the head has descended. The anterior shoulder slides upon the anterior inclined plane of the pelvis under the symphysis pubis ; the posterior shoulder passes along the posterior inclined pelvic plane into the hollow of the sacrum thence to sweep over the perinæum into the world.

This familiar mechanism has been rehearsed at length because it has a bearing upon the proper management of the class of cases now to be considered and which form the true material of my theme.

We frequently find multiparæ of the following character: They are wives of poor men and have borne their husbands from four to nine children at the regular tenement-house interval. In their youth, they were slender girls of less than the average height and have married early. Their sylph-like proportions have long since disappeared so that they present the large limbed, full bosomed, cuboidal aspect with which we are all so familiar. Repeated child bearing has caused separation of the abdominal recti, weakness of the oblique abdominal muscles, subinvolution of the abdominal walls so that the uterus falls forward when enlarged, and what they call their high stomachs become markedly accentuated during pregnancy. There may be no suspicion of rachitis about them, but their pelves are very shallow, the pubic rami widely divergent and one or all of the pelvic diameters small. When they stand erect, the axis of the uterus is nearer the horizontal than the perpendicular. If one has occasion to remove an adherent placenta from such a uterus he will be painfully impressed by the extreme extension of the hand necessary to reach the anterior border of the placenta, or the anterior uterine wall. These women bear, as a rule, large children which frequently present in the occipito-posterior position.

When such a patient comes in labor, the head engages badly, progress is slow, and even if the forceps be used the uterus is in a condition of partial inertia by the time the head is delivered. The pains are inefficient to deliver the large body. One shoulder is caught above the symphysis at the angle of the parturient canal, the other is at the promontory of the sacrum or slightly below it. The head of the child is extended and laterally flexed at a right angle to the trunk.

It is just this condition concerning which so little has been written and the best management of which is not to be found in any text-book. It is plain that this position of the child is one of great danger; for the pressure of the maternal parts upon the body of the child without any corresponding pressure upon its head soon leads to death from asphyxia or effusion within the skull. We are all familiar with the cyanotic face and the pouting lips of a child in this position. Jacquemier, the first to mention this variety of dystochia, lost twenty children in twenty-six cases; and Parvin says, (Science and Art of Midwifery, p. 435,) "I have met with this hindrance to delivery in three cases in which the child could not be extracted soon enough to prevent death."

Treatment.—Jacquemier, who as has been said, was the first to make a special study of this condition, advises bringing down the arms by extending them over the head. This procedure is acknowledged by himself and other writers to be difficult and to cause fracture of the arms. Hodge advises pressing the child's neck against the symphysis and in this manner bringing the posterior shoulder to the edge of the perinæum. When the posterior shoulder appears the child is to be carried backward and the anterior shoulder disengaged. Parvin advises traction with the finger in the axilla of the perineal shoulder or with the finger in each axilla. Lusk advises traction upon the sides of the head, or with the finger in the axilla. Mann advises pressing the neck backward upon the perinæum with traction till the anterior shoulder appears under the symphysis, and then forward pressure till the posterior shoulder is born. This is all that is written upon the subject.

By means of any of these procedures we would be able to deliver in the great majority of cases, but in none of them does the proper rationale obtain. How does nature relieve herself in this condition? In the *Medical Record*, Vol. 37, p. 444, may be found the report of a case of impaction of the shoulders in which the pains were strong and delivery took place without external aid. In this case restitution was toward the right thigh of the mother. The face then turned backward toward the perinæum until it looked toward the left thigh. By this semi-revolution the posterior shoulder passed under the symphysis pubis and the anterior shoulder passed into the hollow of the sacrum. The mechanism was exactly analogous to that which obtains in most cases of occipito-posterior presentation of the vertex. This spontaneous rotation then is nature's solution of the problem and should furnish us a proper basis of treatment. Bearing in mind that the shoulders engage in the oblique diameter of the pelvis we should endeavor to rotate the child in the direction of the least resistance. And this direction will be that in which the anteriorly lodged shoulder passes away from the medial line of the mother and not toward it.

In practice this rotation will be best accomplished in this manner: Introduce the finger of the hand corresponding to the maternal thigh toward which the child is looking. If the restitution has been toward the right thigh use the right hand and conversely. The finger thus introduced will enter the axilla of the posterior shoulder on its dorsal aspect. Pull the shoulder sidewise and toward the symphysis. Don't push, but pull. Make the dorsal side of the posterior shoulder the advancing surface. In this way the anterior shoulder is pushed away from the symphysis and is not crowded against it. Passing into the transverse diameter the shoulder glides into the hollow of the sacrum, thence to sweep over the perinæum.

This proposed method of unlocking the impacted shoulder is not mere theoretical reasoning, but has stood the test of actual experience. Previous to its adoption I had had one case of paralysis of the arm from injury to the brachial plexus caused by traction on the head. I had also lost a child from asphyxia during delay while trying in succession the methods given in the books. Since the adoption of this manœuvre, I have had neither accident nor difficulty.

DISCUSSION.

Dr. Jewett:—Mr. President, we are indebted to Dr. Kortright or something new in the obstetric procedure and for a very lucid explanation of the technique. The difficulty in the cases in question consists in the fact that the anterior shoulder is fixed behind the pubes. Dr. Kortright's manœuvre is an easy method of releasing it and unlocking the difficulty.

The little things of practice receive too little attention. Yet so simple a measure as that which has just been proposed, has a far greater value as a life-saving procedure than most capital operations to which much more *éclat* attaches. The man who saves a life in this unpretentious way is entitled to the same credit as he who saves a life by Cæsarean section. The capacity for attention to detail which is shown in the experience just related is a talent which is none too common.

In regard, however, to the management of the complication to which the paper alludes, I have been accustomed to depend upon a method something like this: When the posterior shoulder presents I lift the head well towards the mother's abdomen. I then place the fingers in the posterior axilla and lift that shoulder over the edge of the perinæum, pushing the perinæum gently back. The posterior arm can then be released. When this has been accomplished, the other shoulder may be delivered usually with no difficulty. In other words, I deliver in detail, the entire bisacromial diameter never being allowed to engage at one time. This method has always served my purpose; yet I fully recognize the fact that there may be cases so difficult that it may fail; and I heartily commend the method of Dr. Kortright and shall hold it in readiness for use when the other does not serve.

THE APPLICATION OF THE ELECTRIC LIGHT CURRENT IN ELECTRO-THERAPEUSIS.

BY CHARLES JEWETT, A.M., M.D.

Read before the Brooklyn Gynæcological Society, April 7, 1892.

Electrical effects in therapeutics, as elsewhere, depend mainly upon the *current-strength* or volume of the circulating force. This in turn depends upon the *electro-motive force*, or the pressure under which the current moves, and the *resistance*, or the obstruction which opposes the passage of the force through the medium in which it circulates. A clear conception of the significance of these terms affords the key to a practical knowledge of electro-physics. Since, in the adaptation of the electric light current to office use, the doctor must be to a great extent his own electrician, a few words in elucidation of these rudimentary facts of electrical physics may not be amiss before taking up methods and appliances for our purpose.

ELECTRO-MOTIVE FORCE.

The electro-motive force of a current of electricity is the propelling power of the current. To borrow an illustration from mechanics, electro-motive force is to an electrical current what the driving force or pressure is to a current of water. As water tends to flow from a higher to a lower level, so electricity tends to move from higher to lower tension, in other words, to seek an electrical level. Just as the force of a waterfall is measured by the difference of water level above and below the fall, so the pressure of an electrical current is proportionate to the difference of electrical level or potential, in the body from which and that to which the current is due. Electro-motive force then depends on difference of electrical level or potential. It is frequently spoken of, therefore, as the difference of potential, or simply the potential. The term tension is also used synonymously with electro-motive force.

Definite units have been adopted for the measurement of each of the factors of electrical currents. The unit of electro-motive force is the *volt*. The potential or pressure of the current is, therefore, sometimes termed the voltage. The value of a volt is approximately the electro-motive force of a single Daniell cell in perfect working order. More definitely, it is the equivalent of a mechanical force capable of generating a velocity of one metre per second in a mass of one gramme.

ELECTRICAL RESISTANCE.

A column of water moving through a conducting pipe meets with a certain amount of resistance. So the circulation of electricity encounters more or less obstruction from the conducting medium in which it moves. This is termed electrical resistance. It varies with the nature of the conducting medium. It is least in metals which are consequently good conductors. In many substances, such as glass, hard rubber and dry wood the resistance is so great that these bodies are practically non-conductors. Again, electrical resistance, like that of the water column, will vary directly as the length of the conductor and inversely as its cross-section. Long wires, then, will offer proportionately more resistance than short ones of the same size and material, and fine wires more than coarse ones in the exact ratio of their sectional areas, and the same is true of all conducting media.

It must be borne in mind that in battery circuits the battery forms a part of the circuit, and the battery elements as well as the conducting wire offer resistance. The resistance within the battery is called the internal resistance in distinction from that without which is the external resistance of the circuit. The internal resistance varies greatly in different types of battery, and this fact has an important bearing in explaining the great difference in the performance of batteries of different construction.

The unit of resistance is the *ohm*, the value of an ohm being the resistance of a column of pure mercury whose cross-section is one square millimetre, length 106.25 cm., and the temperature zero centigrade (the temperature of melting ice).

CURRENT.

The term current technically stands for the current-strength, or the volume of electricity that flows in the circuit. The current-strength depends upon the resistance in the circuit and the electro-motive pressure under which the current is impelled. Remembering that the battery itself forms a part of the circuit, it is plain that a battery of high internal resistance, like most of those in common use, can yield but a limited volume of current, however small the resistance in the metallic or external portion of the circuit. On the other hand, storage batteries, in which the internal resistance is but a few thousandths of an ohm, yield current in enormous volume through small external resistance. The same is true of all batteries of low internal resistance. Since the internal resistance of a battery is due chiefly to the resistance of the fluid between the plates, it follows that batteries of large plates are capable of yielding more current than batteries of the same type having small plates, since the conducting power of the fluid column varies directly as the area of its cross-section. But it must not be forgotten that the current volume from large cells is greater than from small ones of the same type only when the external resistance is small. Where high external resistances are concerned, like those of the human body, the size of the cell makes practically no difference in the current-strength, as can readily be shown by Ohm's formula.

No matter what the volume of current a given battery is capable of yielding, the current which actually flows in the circuit will be limited by the external resistance. Resistance, however, is partially overcome by increased pressure, therefore whatever the external resistance, so long as there is any current at all, its volume will become greater and greater in proportion as the electro-motive force is higher. The current, therefore, varies directly as the potential or electro-motive force under which it moves and inversely as the total resistance. This fact is known as Ohm's law, and is expressed mathematically by the formula $C = E \div R$. It is evident from this formula that if the resistance were zero, the current would be infinitely great, even from a single cell of battery. If the resistance were infinitely great, the current would be zero, no matter how powerful the generator. It will be found in practice that the amount of resistance in the circuit is a very important factor in determining the volume of current. When the external resistance is reduced to an amount so small as to be inappreciable, when, in other words, the battery or dynamo is short-circuited, it yields its full volume of current. On the other hand, if the resistance is very great the current may be insignificant even from a generator of great power.

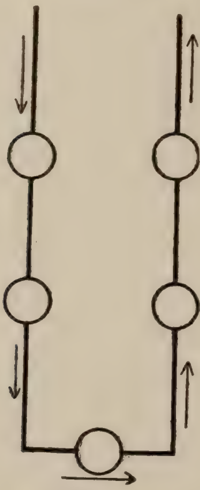

Fig. 1.

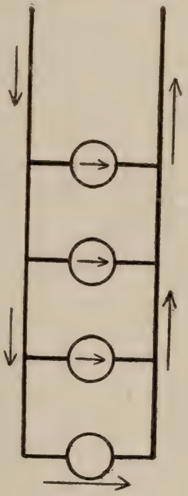

Fig. 2.

The unit of current is the *ampère*, the value of which is the volume of current that flows in a circuit, under a potential of one volt through one ohm of resistance. In medicine, however, where we have to do with small quantities only, the *milliampère* or thousandth of an ampère is the unit commonly employed.

We are now prepared to understand the difference between battery currents and the current of the Edison light system. Currents from batteries of the ordinary type are currents of small volume, owing in part to the high internal resistance of these batteries. Moreover, since only about fifty elements are ordinarily used, the voltage is lower than that of the incandescent light current, and the drop in current-strength under high external resistance is greater. A battery of fifty of the latest pattern of Law cells, for example, in good order, is capable of giving on short circuit a current of about four ampères, with a voltage of 74. The Edison current, on the other hand, has a voltage of 115, and will yield a current, therefore, of 115 ampères, through a resistance of one ohm.

Two terms, *multiple-arc* and *series*, here require explanation. Instruments are said to be arranged in series when they are so connected in circuit that the current runs through them successively, as in Fig. 1. An instrument is in series when it is placed in one side of the circuit. Instruments are said to be arranged in multiple arc when two or more are so connected as to form bridges or arcs between the two sides of the circuit. This latter arrangement is shown in Fig. 2.

The ordinary applications of electricity in a doctor's office fall under three heads: galvanism, faradism, cautery. Each requires a somewhat different adaptation of the incandescent current, which we will now proceed to consider.

Galvanism. This I assume, and not electrolysis, is the proper term for the application of the smooth or interrupted galvanic current as used in gynæcology and in general medicine. It will naturally be feared that more or less danger may attach to the use of therapeutic currents from so powerful a source as the Edison dynamos. There is no difficulty, however, in using the direct current from the Edison mains with entire safety. The whole secret lies in the use of plenty of resistance. The volume of current which flows into the office is limited first by the size of the conducting wire. Again, at the point where the circuit enters the house, safety fuses of limited capacity are intercalated in both sides of the circuit. These fuses, which consist of thin lead or copper wire, act as safety valves, since they melt or "blow out" and break the circuit if the current by any accident exceeds the capacity of the fuse, which may be fixed at any amount required by varying the size of the fuse-wire. If now the current thus controlled is passed through a 16 c.p. lamp, connected in series as shown in Fig. 3, the volume of current which flows through the lamp, and, therefore, in the entire loop in which the lamp is connected, is about one-half an ampère. The lamp acts as a water-gate does in a water-main, with this important difference, however, that if the lamp breaks the entire circuit is instantly arrested. A larger or smaller current may be had by substituting for the 16 c.p. lamp another of higher or lower capacity. The half ampère current, however, is a good stock current from which to draw for most gynæcological and medical purposes. By means of a suitable rheostat this current can be controlled as the flow of water is by a tap, and may be varied from zero to any number of milliampères required.

On first undertaking the adaptation of the Edison current to office uses I shared the opinion of Dr. Piffard that the high voltage of the current from the street mains would render it more painful than the currents of lower pressure we have been accustomed to use. Further examination of the subject has convinced me of the error of this assumption. Electro-motive pressure has no influence except to overcome resistance. The physiological effects of a smooth current depend upon the volume and quantity of current. With a given ampèrage actually flowing through the tissues, the effects are the same whatever the electro-motive pressure. The current does the work, the pressure pushes it through the tissues. Since these views are somewhat at variance with a commonly accepted opinion among medical writers, I may say that they are endorsed by my friend, Prof. Robert Spice, of the Cooper Union, a physicist of recognized authority.

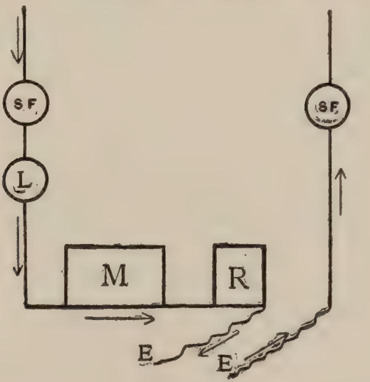

Fig. 3.

S. F. Safety fuses at the Edison terminals; L. 16 c.p. lamp; M. milammeter; R. Rheostat or current regulator.

Under the belief that the high voltage of the Edison current is painful, Piffard and others make use of a shunt circuit for the purpose of reducing the potential. This plan may be understood by referring to Fig. 4.

L and L^1 are lamps connected in series in the main circuit. A secondary loop is led from points of the main circuit on either side of the lamp L. The patient is placed in this secondary or shunt circuit, which also includes the milammeter and the regulator, and both lamps are turned on. This arrangement is not only unnecessary, but it does not even accomplish what it is supposed to do. On short circuit the voltage in the shunt drops more or less, and may be varied, according to the resistance in the shunting lamp, from three or four to seventy volts. With the patient in circuit, however, the voltage is practically the same for a given current whether the patient is in the direct or the shunt circuit.

For determining the polarity of the electrodes the milammeter affords the most convenient method, provided the direction in which the needle turns with an up-current has once been determined. In most instruments the needle is deflected in the direction in which the current flows. If, therefore, in the arrangement shown in Fig. 3, the needle of the milammeter turns to the right, E is the positive, E¹ the negative electrode. The polarity may also be determined by the electrolytic action of the current. If the copper terminals are dipped at a short distance apart in a glass of water and a half ampère current turned on, hydrogen bubbles will be given off at the negative pole, while no visible action occurs at the opposite pole. Or if platinum terminals be used and dipped in a solution of iodide of potassium, a brownish discoloration will be noted about the positive electrode from the liberation of iodine.

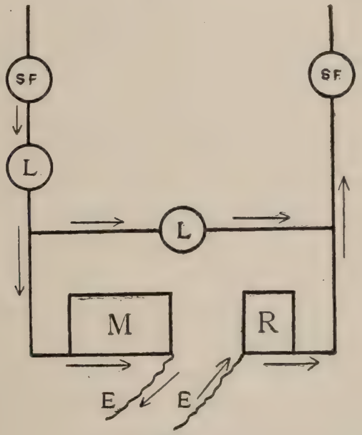

Fig. 4.

Faradism. For Faradism a coil may be operated by a switch from the main circuit. The current required may best be obtained by a separate loop with a 16 or 32 c.p. lamp, connected in series. The milammeter should not be included in this circuit; it is desirable that a rheostat should be, for regulation of the primary current.

No little misapprehension obtains in regard to the construction required in Faradic apparatus. It is a common error to assume that galvanic, Faradic and Franklinic electricity are different kinds of force. They are, in fact, one and the same. The essential differences in their physical or physiological effects is due to difference in the character of the currents. Galvanic currents as ordinarily used are smooth, continuous currents. Faradic currents are alternating currents. The peculiar effects of a Faradic current are mainly due to the fact that it is an interrupted current. The current from the secondary coil is at the same time an alternating current. Yet the impulses in one direction are so much feebler (about 13 times) than those in the other, that little importance can be attached to the alternating character of the Faradic current. The physiological effects, too, vary with the rate of interruptions—the number of periods per second. While the current-strength on short circuit is very small, the drop, even under great resistance, is comparatively little owing to the high electro-motive pressure. There can be no important physical difference, then, between a Faradic current and a direct interrupted galvanic current of the same volume and tension and number of periods per second. The tension of secondary Faradic currents as commonly used in medicine I have estimated at from 50 to 100 volts or more, and the current, on short circuit, averages about a half milliampère, does not often exceed a milliampère. A current of this strength and tension obtained from the Edison mains by the interposition of suitable resistance and with the use of an adjustable rheotome, would answer all the purposes of Faradic electricity. With a milammeter capable of registering fractions of a milliampère, precision of measurement would be possible by this method, and that at present is out of the question with Faradic instruments. Having rheostat, milammeter, rheotome and patient in circuit, the required current could be turned on and broken at the required rate of interruption. With suitable metric apparatus the current-strength and the number of impulses per unit of time could always be accurately known and recorded. The Faradic coil, however, is practically indispensable as a simple and convenient source of interrupted currents of infinitesimal volume and high tension. Precision of measurement in the use of Faradism is not yet possible.

The requirements of a Faradic instrument may be met by a very simple construction. All that is needed is an induction apparatus with a secondary coil of long, fine wire and a rheotome or rheotomes adjustable to give from 2 to 200 interruptions per second. An instrument thus simple will accomplish all that is possible with the multiple coils of Engelmann and others. It is a fallacy to assume, as certain writers on this subject have done, that a secondary coil, wound with a given length and fineness of wire, ensures a current of fixed volume and tension, even with the same primary. Current-strength, as we have seen, depends upon the resistance in the circuit and the electro-motive force. Resistance varies with the moisture of the electrodes, their area and firmness of contact, the thickness and dryness of the skin at the point of contact, and other conditions. Electro-motive force, and therefore the current in the secondary circuit, varies with the strength of the primary current, the rate of interruptions, and the extent to which the outer covers the inner coil. Hence, an induction coil wound to give the highest electro-motive force that can be required for any use will answer for all uses. The tension, and therefore the current, can be graduated from this maximum to zero by moving the outer coil so as to gradually uncover the inner one, or by regulating the strength of the primary current by means of the current controller. A still simpler method of regulating the secondary current is by means of a current controller placed in the secondary circuit. The entire range of tension (and therefore volume) of which the coil is capable is thus at command without moving the outer coil or changing the strength of the primary current.

More or less importance is attached to the so-called primary current from induction apparatus by many writers on electro-therapeutics. This current is nothing more than a series of impulses all moving in one direction, and the result of self-induction in the primary coil. It has no properties that distinguish it in any essential particulars from induced currents obtainable from the secondary coil, or an interrupted direct current of equal volume and tension.

The most approved Faradic apparatus is that constructed on the Du Bois-Reymond principle. An excellent Faradic instrument in point of both mechanical construction and physical performance is made by the Law Battery Co., of New York, and is shown in Fig. 5. Its secondary coil is wound with 1,200 feet of No. 32 wire, giving a wide range of tension, and it is provided with two rheotomes for slow and rapid interruptions. The outer coil is movable over the inner by means of a rack and pinion.

Cautery. A convenient plan for cautery currents is shown in the right-hand section of Fig. 8. A is a bank of lamps arranged in parallel multiple-arc. Two of the lamps are 16 c.p. lamps, each carrying a little less than a half ampère (0.43 ampère)* current. The others are 50 c.p. lamps, having each a current capacity of not quite one-and-a-half ampères (1.36 ampères). Each lamp turned on adds to the current an amount equal to its own capacity. Such a bank is suitable for a twenty ampère current. which is an average cautery current. The system may be easily extended to give thirty or forty ampères for heavier work. If a switch-plug is placed in B, the right-hand section is ready for cautery; if in C, the left-hand section may be used for galvanism.

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*Edison lamps.

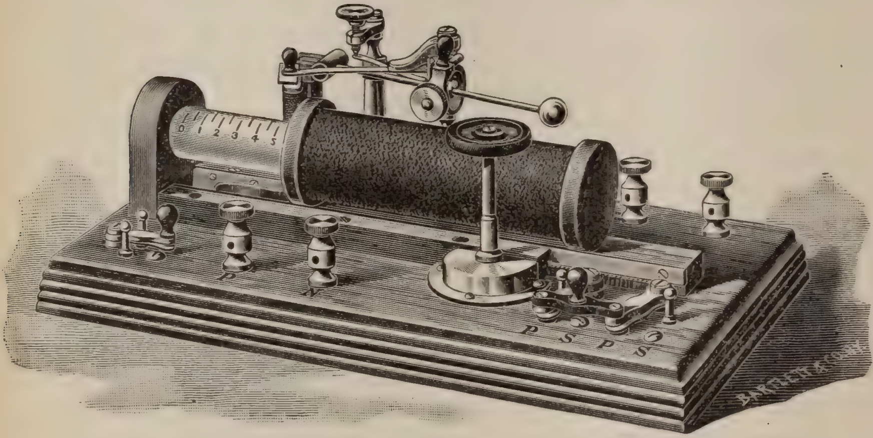

Fig .5.

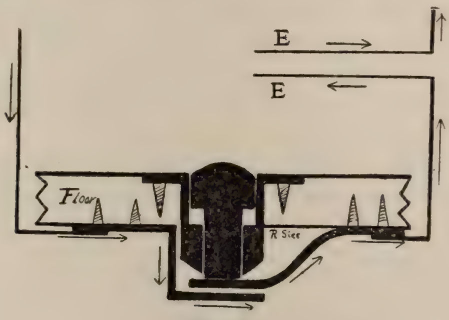

Fig. 6.

The conducting wires in the handles of most cautery electrodes are made too light, and are liable to become heated. The contact points are especially apt to suffer, and for this reason it is well to close the contacts of the electrode handles permanently, and to make and break circuit by a heavy floor push-button such as is shown in Fig. 6.

The simple plan above described will be found far more convenient and satisfactory for cautery currents than the cumbersome and costly motor-dynamo-transformer. The latter apparatus is wholly unnecessary for the purpose.

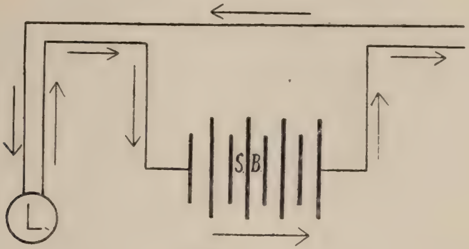

Fig. 7.

For a portable cautery plant the storage battery has practically supplanted all others. A storage battery, however, to be kept in good condition must be used daily, must be recharged as often as used, and its charge must never be more than one-third exhausted. It is advisable, therefore, to make the portable storage battery do duty also

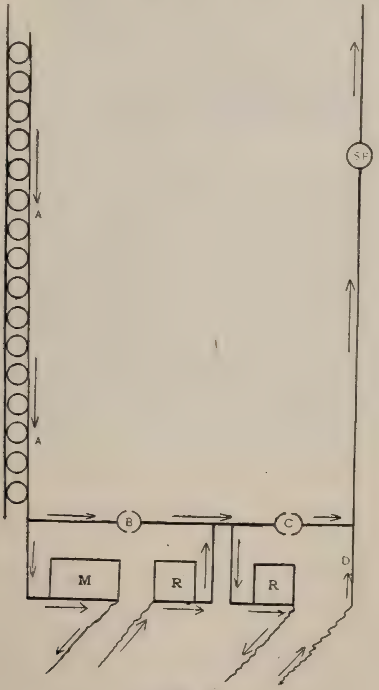

Fig. 8.

for office purposes. Most of the annoyance which attaches to the use of storage batteries that require to be sent out at short intervals to be recharged may be obviated when the charging current can be had on tap in the office. If the battery is kept well charged, and the charging current allowed to run through it daily, very little additional attention will be needed to keep it at all times in perfect working order. For charging, the positive terminal of the charging wire must be connected with the positive pole of the battery, and the negative with the negative pole. Moreover, the volume of the charging current must be regulated according to the size or capacity of the battery. It may be just enough so that the fluid does not boil perceptibly. The battery will be injured or destroyed if these precautions are not observed. A safe charging rate is three ampères for every square foot of anode surface in the battery plates. A more convenient rule, however, is about one ampère for every twenty ampère-hours of battery capacity. For the usual medical battery a half ampère current answers sufficiently well. A simple and economical method of charging is shown in Fig. 7. The battery is connected by a loop with a single 16 c.p. lamp circuit, which is used for ordinary illumination. When the lamp is turned

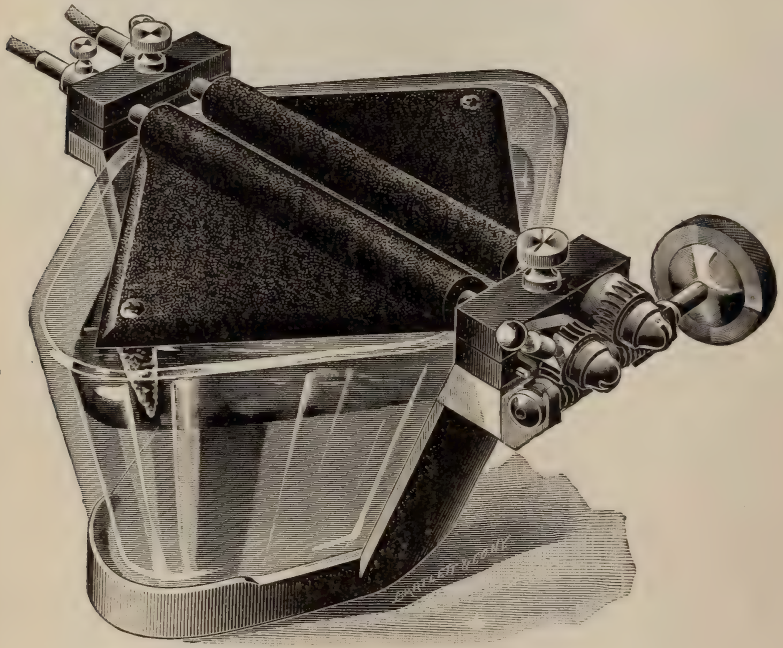

Fig. 9.

on the battery is being charged. Frequent charging and the maintenance of a full charge are thus secured without special attention.

A search-lamp may be operated by the storage battery or by connecting it with the terminals of the cautery plant represented in the right-hand section of Fig. 8. The current required by the miniature lamps usually employed for this purpose is about two or two-and-a-half ampères. Turning on two of the 50 c.p. lamps in the bank the current may then be turned up by the regulator till the search-lamp burns to full incandescence.

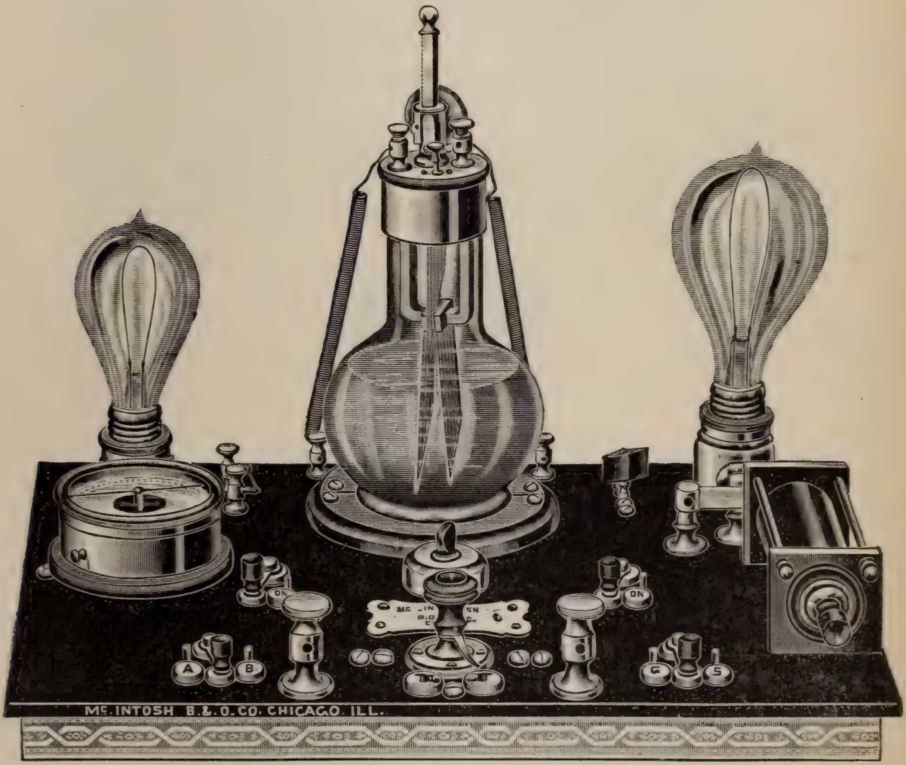
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Fig. 10.

Rheostats or current regulators. After careful comparison of a number of rheostats, I have found nothing better for use with the Edison current than the Bailey water rheostat. In the old instrument, however, the aluminum wire should be replaced with platinum to prevent corrosion at the contacts. The new Bailey regulator (see Fig. 9), made by the Law Battery Co., of New York, is in many respects an improvement on the old one. A good dry rheostat for the purpose is the Willms. The Vetter regulator is suitable for use only with currents of half an ampère or less. Where currents of large volume are required, as for charging storage batteries, a single lamp of large capacity may be used. A still more convenient regulator for large currents is a bank of lamps arranged in parallel multiple-arc, as shown in Fig. 8.

Milammeters. The milammeters sold by most instrument makers are inaccurate, unreliable, and otherwise imperfect. Absolute accuracy of measurement, while not indispensable for medical use, is certainly desirable. The only accurate milammeter at present made is that of the Weston Electrical Instrument Company, of Newark, N. J. The instruments of this company are universally recognized as standard. Another advantage of the Weston meter is the fact that it is absolutely "dead beat"—in other words, the needle moves to the reading and stops instantly. Unfortunately this instrument is a costly one. The next best milammeters that I have tested are the Vetter and the New Barrett meters.

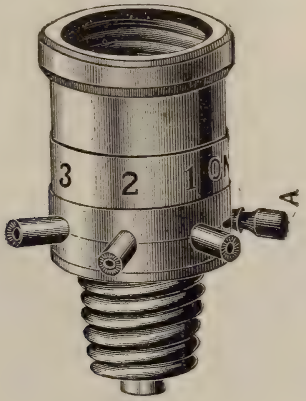

Fig. 11.

For those who prefer to purchase a switch-board fully equipped for use with the electric illuminating current, a suitable apparatus may be had of the W. F. Ford Surgical Instrument Company, of New York. A switch-board sold by the McIntosh Battery & Optical Company, of Chicago, is shown in Fig. 10.

A simple and inexpensive adapter intended for use with galvanic and Faradic apparatus only is made by J. C. Vetter & Co., of New York. It is a lamp socket with connecting posts for conducting cords. It may be screwed into any lamp socket or wall receptacle. The apparatus is shown in Fig. 11.

JOHN CAIUS, CAY, KAY, KAYE, KEY, OR KEYE.

So various are the forms by which the name of this distinguished physician and scholar are seen. He was born in Norwich, Eng., October 6, 1510. At an early age he entered Gonvil Hall, Cambridge, where he was distinguished for his application and scholarship, having at the age of twenty-one translated several works from Greek into Latin and others from Latin into English. From Cambridge he went to Italy, where he studied medicine under the learned Montanus, at Padua, and soon became so eminent in that faculty as to become the public professor of Greek, upon which subject he continued to lecture for several years. While in Padua, Caius lodged in the same house with the celebrated anatomist, Vesalius, and pursued his anatomical studies with an ardor equal to that of his companion.

He took his medical degree at Padua, in 1541, and returning to England, he was in 1547, admitted a fellow of the Royal College of Physicians, in which he successively held all the higher offices, succeeding Linacre as its second President, to which office he was re-elected no less than nine times, between the years 1555 and 1572, when, "in consideration of his age, engagements elsewhere, and long and valued services to the college," he was excused from further attendance, "except at the quarterly comitia," or on occasions when any important or extraordinary business was under discussion.

During this period he kept a complete record of the annals of the college, written with his own hand in elegant Latin, entering every memorable transaction in its due time and order. He was always a zealous defender of the college's rights and privileges, and a strict observer of her statutes, never even in advanced life, absenting himself from the comitia, or meetings, without a dispensation.

During the reign of Queen Elizabeth, there arose a difference betwixt the physicians and surgeons, as to whether the surgeon might give internal remedies. Dr. Caius was summoned (as President of the college) to appear before the Lord Mayor and others of the Queen's delegates, before whom he so learnedly defended the rights of the College of Physicians, and showed the illegality of the surgeons' practice, that it was unanimously agreed that it was unlawful for them to practice in such cases. His zeal in this and similar cases may have earned for him the enmity of the surgeons and some of their friends, or at all events, it, together with his exalted position as court physician, made him notorious; though it appears strange that Shakespeare should have selected his name for the ridiculous French doctor, in the "Merry Wives of Windsor," for to no one was the character less fitted than the real Doctor Caius, who as we have seen, was a man of extensive acquirements and profound knowledge.

He was the recipient of the highest honors obtainable by a physician in his day, being successively physician to Edward VI., Queen Mary, and Queen Elizabeth. In 1557, being in great favor with Queen Mary, and it is said, almost an oracle in her opinion, he determined to employ this influence in behalf of his Alma Mater. Accordingly, he obtained a license to advance Gonvil Hall, at Cambridge, to the dignity of a college. As yet it was not a corporated institution, but by Caius' interest at Court, it was incorporated by the name of Gonvil and Caius College which he endowed with considerable estates, for the maintenance of an additional number of fellows and scholars. This is now the leading medical college at Cambridge. He drew up the first statutes of the new college, and that he might have the better opportunity of consulting its interests, he accepted and retained the mastership, almost as long as he lived, and after the appointment of his successor, he continued to reside in the college as a fellow-commoner, assisting daily at divine service in the chapel. Here he died, July 29, 1573, in the 63d year of his age, and his remains were deposited in a tomb which he had erected in the college chapel some time before his death, which it is said he had accurately foretold,

SOME SUPPURATIVE CONDITIONS OF THE SKIN FOLLOWING PRICKLY HEAT.

BY GEORGE D. HOLSTEN, M.D.,

Attending Physician, Diseases of the Skin, Brooklyn, E. D., Hospital Dispensary.

Read before the Medical Society of the County of Kings, February 16, 1892.

During the past summer there have been periods varying from three to six days, during which the temperature was very high and the amount of humidity in the atmosphere considerable. At these times, and for two or three weeks after, there came to the clinic for diseases of the skin in the Brooklyn, E. D., Hospital, a large number of cases characterized by eruptions, which were more or less suppurative in their nature. The lesions varied in intensity from simple superficial excoriations of the epidermis, to deep seated collections of pus, causing more or less loss of tissue, and which were attended in certain instances by enlargement of the lymphatic glands.

In many of these cases a dermatitis of varying extent and intensity also existed on some portion of the body, or the condition popularly known as "prickly heat"; or else the history was obtained that one or the other of these conditions had been present before the appearance of the suppurative lesions, and that these latter originated for the most part, on the same portion of the body. The face, scalp and neck were seats of predilection; the legs and feet, including the toes, came next, then the forearms and skin surrounding the finger nails, and lastly the abdomen, chest and back. The buttocks and pubic regions were also frequently affected in certain cases, notably in infants.

In character, these lesions varied very much. Some began as superficial, small, flat vesicles, whose contents rapidly became purulent or semi-purulent, and which dried up forming thin, yellowish or greenish crusts. On removing this crust an abrasion or excoriation of the epidermis, and a small amount of pus would be noted; or the lesions were slightly deeper, and surrounded by an areola of redness, but differing only in representing a more intense grade. At times the primary vesicle would not be met with, only an excoriation being observed.

Closely associated with these morbid phenomena, pustules would also be seen, which were variable in size, though generally small and superficial, and projecting above the level of the skin, with pointed or rounded tops; they would become converted by being ruptured into excoriations or ulcerations, which occasionally left cicatrices, faint and slightly pigmented, but which, after a time, faded away until they were hardly discernible. A deviation from this course was, however, frequent; the pustule becoming larger, the inflammatory process extending deeper into the corium, a higher grade of intensity ensuing, and the result being shown in the production of furuncles accompanied by a more or less loss of substance.

These various manifestations, differing from each other in proportion as they were superficial, or more or less deeply seated in the skin, did not always occur separately and alone, but were often seen on the same individual, combined together to a greater or less amount on the same portion of the body. The face and scalp were most frequently the seat of the polymorphous form of the eruption, and on these surfaces it manifested its greatest severity. On the legs the appearances were more those attributed to ecthymatous lesions, and they were always more numerous around the ankle and over the instep. Around the finger nails the suppurative conditions became, in some cases, so great that marked changes in the growth of the nail and subsequent malformation sometimes resulted.

In the patients in whom these suppurative processes of the skin occurred, the general condition varied. Some were, to all appearances, in the enjoyment of the best of health, were well nourished, with all the functions of organic life apparently in good condition. On the other hand, others were very much depressed physically, thin and poorly nourished, sufferers from disturbances of digestion, assimilation, etc. These latter were invariably the most severe sufferers from the skin symptoms, and upon them the lesions developed rapidly and with great intensity. Still, there were exceptions, and patients would also be seen who, to all appearances, were healthy, but yet literally covered with suppurative lesions of the furuncular type. A predisposition to excessive perspiration was an especially marked feature in all of these, and some of them dwelt strongly on this feature, stating that during hot weather, or after severe exertion the perspiration had a bad odor; smelt sour and stale.

A certain amount of personal uncleanliness was also almost always observed, and as a rule, the dirtier the patient, the more severe the eruption.

The majority of the cases were children, from the very young infant, up to the age of twelve or fourteen years. Often all the children of one family had the trouble in varying degrees of intensity. Occasionally, however, adults, notably women, were met, similarly affected; but the proportion of adults as compared with the total number was small.

If we sum up the characteristics of the cutaneous symptoms described, we find that the most striking feature in all of the cases is the presence of suppuration in varying degree, and, in view of this fact I may be permitted to briefly review the literature bearing on the subject, and explanatory of the origin and source of this particular characteristic, before taking up the consideration of the instances which have been under my observation.

Tilbury Fox, (1) in 1864, first called attention to the fact that impetigo lesions were contagious; and Vidal, (2) in 1872, demonstrated that the pustules of ecthyma were auto-inoculable. Kocher, (3) in a paper upon osteomyelitis published in 1878, drew attention to the possibility of all acute inflammations being due to micro-organisms, and the constant presence of micrococci in pus led Ogston (4) to investigations directed towards determining the reason of their existence there, and their connection with it. He examined the pus from 69 abscesses, and found in 17 of them a chain coccus (streptococcus); in 31, cocci arranging themselves in groups (staphylococcus); and in 16, both of these forms were present. He also found that the action of these two organisms on the tissue differed; the staphylococcus being found only in abscesses which were circumscribed, while the streptococcus followed the lymphatic channels and was seen to be the cause of diffuse suppurative processes.

Rosenbach, (5) availing himself of improvements in bacteriological research, cultivated the pus microbes upon solid nutrient media, and designated the different cocci differentiated by him as the staphylococcus pyogenes aureus et albus, the streptococcus pyogenes, and the micrococcus pyogenes tenius.

Passet, (6) in 1885, found in an examination of thirty-three cases instead of the four pyogenic cocci described by Rosenbach, no less than eight; and he concluded that the pyogenic organisms could at one time be the causation of a light panaritum, hordeolum, or small subcutaneous suppuration; at another time could produce severe diffuse fatal phlegmons, acute osteomyelitis or pyæmic abscesses, etc., and this great variation in the results depended on whether the inoculation was made subcutaneously, intra-pleural, or intravenous, and he laid special stress on this point of invasion of the micro-organisms (invasionsortes). He also believed that infection was not always produced by one coccus alone, but often by the invasion of the body by several species of cocci at the same time.

As to the source of these pyogenic cocci, it is interesting to know that Passet found the staphylococcus p. aureus in house-drain water; the staphylococcus p. albus in raw beef which had lain in the kitchen for several days, and was beginning to smell; while examination of air, dust, earth, milk, drinking-water and "sauer-kraut" were without result. Many other investigators have, however, found them in dust, air and earth.

Garré, (7) in 72 cases of paronychia, furuncles, abscesses and phlegmons, found in 68 of them, the staphylococcus p. aureus and albus, either together or alone. In four cases of phlegmon the streptococcus, three times alone and once with the staphylococcus. He also undertook an experiment upon himself with a culture of staphylococci, bringing a small quantity in contact with wounds of the fold of the finger nail, which on the second day produced epidermal suppuration, extending around the entire circumference of the finger nail, and cultures from the pus yielded on agar the staphylococcus aureus. He then applied a mass of a culture of the third generation in the same manner as a salve on the sound, unbroken skin of his left forearm, and after four days a large typical furuncle developed, around whose periphery were seated a number, of isolated furuncles. There was also swelling of the contiguous lymphatic glands. The process continued many weeks and ultimately left numerous scars. Garré was of the opinion that the infectious material made its way through the excretory ducts of the glands of the skin.

Bockhart, (8) in 1887, in an article on the ætiology of impetigo, furuncles and sycosis, showed that these conditions were due to the invasion of the staphylococcus p. albus and aureus into the skin, and claimed that these three affections were not different diseases, but only different grades of development of the same disease process.

Twenty-two cases of impetigo were examined microscopically and by cultures and in all the staphylococcus p. albus and aureus were found, without any other micro-organism. The same results were obtained in five cases of sycosis, and in many cases of furuncles which had developed on the patients affected with impetigo.

Bockhart, in experiments on his own person, also obtained the following results. Unlike Garré, who used all of the substances produced by culture, he took small particles of the bacteria grown on agar; suspended them in a sterilized 0.5% salt solution, and then placed them on the normal, unbroken skin; when the skin was then lightly scratched with a disinfected finger nail so as only to remove the horny layer of the epidermis, the result was the same as obtained by Garré, but of a milder type—impetigo pustules, with here and there small furuncles. The microscopical examination of an excised piece of skin, on which was seated a pustule, showed cocci in the hair follicles and the ducts of the sweat and sebaceous glands; or, where the protecting horny layer had been removed by scratching, the micro-organisms were found in the rete.

If these cocci passed into the surrounding tissue through the glands or through some other portion of the epidermis, then an abscess and not a furuncle was produced. This he proved by making inoculations with a fine lancet and obtaining abscesses as a result. Inoculations on the hairy portions of the body were not made, still Bockhart considered sycosis as impetigo pustules modified by anatomical situation.

Schimmelbusch, (9) in 1888, repeated the experiments of Garré and Bockhart, achieving the same results.

Welch, (10) in an article on "Wound Infection," read at the last Congress of American Physicians and Surgeons, said that the bacteria concerned in wound infection may be many, but the pyogenic cocci of Ogsten, Rosenbach and Passet, far outranked in frequency, and therefore in importance, all other bacteria combined.

Another observation made by Welch I think of so much importance that I quote from this article:

"The skin may have all sorts of bacteria upon its surface, but, like the mouth and the intestine, in addition to these it has its own destructive bacterial flora.

"If the hands be thoroughly scrubbed with soap and hot water with a sterilized brush, or if this be followed by washing the hands in sublimate solution, and the mercury be precipitated by sulphide of ammonia, the cultures obtained from scrapings of the skin so treated, will generally be found to contain, as the prevailing organism, the white staphylococcus, and often this will appear in nearly or quite pure culture.

"But the most important point is, that this coccus is very often present in parts of the epidermis deeper than can be reached by any known means of cutaneous disinfection, save the application of heat. * * * * *

"So far as our observations extend, and already they amount to a large number, this coccus may be regarded as a nearly, if not quite, constant inhabitant of the epidermis."

Welch proposes to call this deep lying coccus the staphylococcus epidermis albus, because it possesses but feeble pyogenic power, and thinks it is probably the same as identified by Bossowski and others with the ordinary staphylococcus pyogenes albus of Rosenbach, and that it is an attenuated or modified form of the latter organism.

From this brief summary of a few of the large number of investigators who have contributed to our knowledge of the causes of suppuration, and who have aided in establishing on a firm basis the bacteriological origin of pus, it cannot but be evident that, associating the symptoms described and met with in the cases which came under my observation with the presence of pus cocci, we are strictly in the path of modern pathology, and the views which may be expressed by me have in consequence the sanction of the highest authority, and the support of scientific research. In other words, instead of considering the lesions in these cases—pustules, furuncles, etc.,—as the outcome of some materia peccans floating around in the system; instead of accusing some "impurity of the blood"—and what this impurity may be has never been demonstrated—as their cause, we have ocular and inoculation demonstrations of the fact that they are due to the presence of certain micro-organisms, which, obtaining a foothold in the skin at various, depths, have led to the symptoms of reactionary inflammation and the formation of pus. As a result, it is possible for us to form some satisfactory opinion in regard to the symptoms; an opinion important both as regards the treatment of these cases and their prophylaxis.

In the first place, we find that the development of the lesions occurred during a spell of intensely hot weather, that a simple dermatitis or an eruption of prickly heat on some portion of the body preceded their appearance, that excessive and offensive sweating was a noticeable forerunner and accompaniment of the eruption, and that personal uncleanliness was a marked factor, and under these circumstances we can easily understand how the effects of the presence of bacterial life may be produced. The humid weather, the hyperactivity of the skin as shown by the sweating, the weakened condition of the skin owing to the inflammatory condition already existing—the dermatitis, the prickly heat—can all be regarded as factors favorable to the development of the micro-organism; while the scaling incident to the presence of these inflammations, and the slight wounds produced by the scratching, would open the door for the entrance of the bacterial agents. We do not have to seek far for these latter, for inasmuch as both pathogenic and non-pathogenic micro-organisms have been found as constantly present on the skin, we would certainly expect them to be all the more abundant in those who were uncleanly in their person, such as were the patients seen by me.

From what has been said, therefore, I would regard the conditions seen in the cases referred to in this paper, as the outcome of bacterial invasion of the skin under circumstances favorable to the development of the micro-organisms, the different lesions *not* being representative of different diseases, or each due to any special cause, but being the result of the same agent, and varying in character only on account of the location in the skin of the infection, whether superficial or deep, whether in the glandular bodies or on the surface, or in the corium.

That after the inception of the pustular lesions others should appear here and there on the surface of the body is easily explained by what has already been said, and also by inoculation. The patients experience a certain degree of itching which induces scratching, the pus gets under their finger nails, and is conveyed by these here and there to other portions or the surface, and is inoculated by the rubbing and scratching of the skin always going on in these cases, not only on the affected, but on contiguous parts of the body. Another mode of conveyance is by means of the clothing of the patient, most often soiled and infrequently changed, which allow the infecting agent also to remain in contact with the skin for a more or less long period of time. When we consider how easily this conveyance can take place, it is readily understood how new lesions are continually cropping out, and how a case continues in existence for a long period of time; or rather until proper treatment being used, and internal and useless dosing given up, the source and cause of the infecting process is destroyed.

As an example of the effect of clothing in propagating such suppurative process, I would briefly mention a case reported by Leloir, of a young man who, regularly every winter, suffered from furuncles of the neck. As soon as the cold weather began he was accustomed to wear an overcoat, the collar of which was soiled, and which had formerly belonged to his brother who had died of a carbuncle on the neck.

Before turning to the possibly most important portion of the subject—the treatment—allow me to report briefly a few of the cases which have been under my care:

Florence D., æt. eight months, was brought to my clinic suffering from prickly heat of over three weeks' duration. The chest and face were covered with the eruption, and in addition there were vesicles, vesico-pustules and pustules on the lower extremities; impetiginous pustules on the face, two suppurating excoriations on the abdomen, and a small pustule on her left arm. The nails of middle fingers of both hands were surrounded by paronychia.

Louise E., æt. eleven months. Has had prickly heat more or less intensely all summer; considerable itching and scratching. During the past two weeks furuncles have appeared on the scalp and neck.

Kate and Joseph S., æt. respectively seven and three years. Two weeks before they came to the clinic Kate developed a dermatitis on the buttocks which spread around to the abdomen, and up on to the back; through scratching the epidermis was torn off and these excoriations began to suppurate. Pustules also appeared on the hands and around finger nails. One week afterwards, Joseph, without any previous affection of the skin, began to develop pustules on hands and fingers.

Kate H., æt. twenty-nine, came July 20th with an eruption of prickly heat on her face and chest, which had existed since the early part of the summer. Itching was intense, inducing considerable scratching, and the face, body and extremities were covered with scratch marks; in addition there were furuncles on forehead and chin. These latter first appeared one week before.

Fannie B., æt. five years, came July 27th with a dermatitis of face and scalp which, in places, was suppurative in character, and showed signs of scratching. This had existed a little over two weeks. The child was fretful, and her mother carried her in her arms during the greater portion of the day, holding her in such a position that the child's head rested on the mother's right arm. The mother had four pustules on the right wrist, and three on the forearm near the bend of the elbow. These had appeared about a week previously.

Mary T., æt. two-and-a-half years, came to the clinic July 27th with a moist eczema of neurotic type on the face, and in addition, prickly heat and patches of suppurative excoriations on neck and chest. She returned August 3d and 17th, but owing to inattention in carrying out treatment the lesions during that time did not improve; if anything, the suppurative conditions became worse.

Nellie N. was brought to me on August 10th with impetiginous lesions on face and hands. William Y. was brought to the clinic on August 31st. He had one large ulceration on chin and around its periphery seven smaller ones. On right thumb paronychia and at its base a vesico-pustule. On left thumb were seated two pustules, and under the left arm was a large superficial suppurative excoriation. The families of these three patients lived in the same house, on the same floor, and were very intimate with each other, the children almost continually playing together, thus showing the contagious nature of these suppurative conditions.

In the treatment of these suppurative conditions of the skin, two indications are to be met. First, the skin must be brought to a condition that it be no longer subject to, and can withstand the attacks of the pyogenic cocci; and second, that these latter, already present, be destroyed.

In regard to the first; all causes which lower the vitality and resisting power of the patient, and thereby of the skin, have to be combated on the same principle as they would be were there no cutaneous lesions present, or evidences of local infection existing. In other words, digestive, assimilative and other functional and organic disturbances must be corrected by appropriate means, and it must especially be borne in mind that there is no internal medication, no specific remedy or remedies, which *per se*, have any efficiency in curing the skin trouble, but whatever is given must be on broad general principles, the object of which is to improve the patient's nutrition and general health, and thus in an indirect manner to remove the susceptibility of the skin to succumb to the attacks of the micro-organisms.

The necessity of thorough cleanliness must be insisted upon and the patient washed frequently; the clothing should be light and suitable to the existing atmospheric temperature. Very frequently children were seen whose entire bodies were covered with a dermatitis caused by being wrapped up in a too abundant amount of clothing, and which passed away entirely as soon as a proper reduction in the amount of the clothing was made.

As the contagious principle may remain for a long time in the clothing, and continue in the suppurative condition, it should not be forgotten that the proper disinfection of the clothing, especially that worn next to the skin, and the bedding, is of importance. This can be best accomplished by prolonged boiling ; it having been demonstrated that a temperature of 212° F. will destroy the pus cocci.

For the destruction of the bacteria present in the lesions and their cure, there are many remedies of the class of antiseptics which can be recommended.

The mercurial preparations are all good; corrosive sublimate, in solution or in ointment, either alone or combined with other remedies, being one of the best. Care must be observed to guard against absorption and poisoning when this remedy is used over an extensive area or for any length of time; and also that the primary condition is such as not to be made worse by the mercurial application. In impetigo, ecthyma and furuncles, when the lesions are not very numerous or cover a large area, corrosive sublimate in strength from 1 in 2000 up to 1 in 500 will be found to answer very well. But it must be remembered that this, or any other remedy, will have but little power if the lesions are covered with crusts; these should therefore be removed before applying the remedy.

The peroxide of hydrogen can be highly recommended as a parasiticide. I often use it in cases of superficial ulcerations, first removing the crust, then applying the peroxide on a cotton swab to each lesion until effervescence ceases; this should be repeated every day for several days, the lesions between the applications being dressed with some other antiseptic. In deeper lesions, as large furuncles, the peroxide can be injected into the cavity, or the furuncles should be opened, then thoroughly swabbed out.

Carbolic acid is good in certain conditions. Applied either pure or in a 50% solution on beginning furuncles it is a painful but very efficient remedy in aborting them. If pus formation has already taken place it is better to open the boil, evacuate the pus, and then treat antiseptically. Care, however, must be observed to guard against carbolic acid poisoning.

Boric acid is used to a considerable extent by me, and when, as in the case of children, the pustular condition is extensive, and preceded or accompanied by prickly heat, its use, or that of biborate of soda in solution or in ointment will be found very beneficial. It may be combined with ichthyol, also an antiseptic in action. The antipruritic property of this remedy is also of importance in treating children, as, by allaying the itching it diminishes the scratching and danger of auto-inoculation. From 2% to 5% of ichthyol with boric acid in saturated solution, or in ointment (ʒi-℥i) will be as strong as necessary.

There are many additional remedies such as the hyposulphite of soda, the sulpho-carbolate of soda, iodoform, aristol, europhen, resorcin, sulphate of zinc, etc., which can be employed and will prove serviceable, and the choice of any of them will rest with the physician, who, making use of the one he is most familiar with, will obtain good results by carefully following out the indications existing in any given case.

Sulphide of calcium, first proposed by Ringer in 1874, in doses of $^{1}/_{10}$ grain frequently repeated, has since then so often been recommended to check suppuration, that I would like to record my own experience with it. I have used it extensively in doses from one-tenth to three grains, at intervals of one hour to three times daily, without having observed any benefit that could not have been more quickly and easily secured from local antiseptic applications.

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DISCUSSION.

Dr. George T. Elliot, of New York:—Mr. President and Gentlemen: I have been very much interested in Dr. Holsten's paper, more especially for the reason that its contents are an evidence of progression in dermatology, a progression from those old times when dermatology was mysterious and was always ascribed to specific causes, to some trouble in the blood, to some materia peccans floating around in various unspecified regions of the body. In those days, unfortunately not so very long ago, the pathological origin of cutaneous lesions was neither investigated nor considered as being external, but they were always regarded as of internal source, to be cured by internal treatment alone. When we, however, take skin diseases upon the basis of modern pathology, especially in view of the advances which have been made in the last ten years in bacteriology and the connection of germs with suppuration and disease in general, we have arrived at the conclusion that a very large proportion of the morbid phenomena observed on the skin are entirely external in origin and have no connection whatever with internal disturbances of one kind or another. Clinically, I have repeatedly seen the truth of these statements, having taken pains to treat a large number of cases of the same disease internally alone, and an equal number externally alone, and to watch the results. In those diseases which we were inclined to consider purely external in origin and existing only in association with functional disturbance of the alimentary tract, we found that the cases treated internally alone improved to a slight extent only after long treatment; but those which we treated locally alone got well in a very short space of time.

Under these circumstances, it would certainly appear as though the systemic disturbances did not originate the skin disease, and among cutaneous processes thus clinically investigated, I would mention those which are met with very frequently, especially in general practice—affections like furuncles or pustular eczema, or contagious impetigo, or slight suppurative conditions on one part or another of the body.

When besides the clinical and therapeutical observations made, those obtained by experimentation are also taken into account, we may safely say, I believe, that it is impossible for us to ascribe these lesions to any other cause than some external agent, which, acting upon the skin, produces the inflammation which we see, and which in one case results in a furuncle, in another in a superficial pustule, or a pustular eczema; or again, if it is situated in a hair follicle, a sycosis. In other words, all of these lesions being due to the same pyogenic cause, the form of cutaneous disease observed will depend simply on the location in the skin of the pathogenetic organism.

In substantiation of the views expressed in regard to the purely external origin of many clinically different diseases, I would refer to the following case, which has been under my care: A young boy developed after vaccination a universal impetigo contagiosa, and was treated for a long time with arsenic and a number of internal remedies without a particle of benefit. When he came under my care he was placed under strict antiseptic treatment, bichloride baths associated with ichthyol applications locally, and it was found that whenever the boy was wrapped up so that the skin was completely covered there were no new lesions formed, but whenever a portion of the body was left uncovered so that he could reach it and scratch it with his hands, then we would have new lesions arising. These observations were made every time that the experiment was tried, and the only possible conclusion was, that he would inoculate himself by the scratching, but that this being prevented the lesions could not develop. Under this antiseptic treatment the boy got well without any internal treatment. This impetigo contagiosa shows its inoculability, moreover, by its going from one member of a family to another, and it is a matter of every day occurrence to see one child develop the process, its brothers and sisters and even parents gradually becoming affected in proportion as one is more exposed than the other to contact with the lesions of the disease. But perhaps the most common form of trouble which we see in children is the pustular eruption on the scalp and elsewhere, associated with pediculi capitis. The pediculus lives simply upon the scalp, but we almost always find its presence accompanied by pustular lesions on the face, or on the fingers, or also extending more or less over various other portions of the body. The explanation of the presence of these lesions in these cases is certainly to be found in the fact that there is always itching of the scalp from the bites of the insects, the child scratches itself, the pus gets under the finger nails and the children scratching their face or various other parts of the body inoculate themselves, and on those surfaces we thus find pustular lesions arising. We do not find them developing on other parts except those scratched, and I have seen in children with only one arm the pustules appearing wherever the single hand could reach, but not on the surfaces out of its reach.

All of these cases simply go to show the fact that the diseases spread by means of auto-inoculation, as it may be expressed; the infection having been implanted on one spot it is carried by the fingers and perhaps in various other ways to other portions of the body, and wherever the pathogenetic element gets a foothold it starts up the same process again.

Another case, illustrating the effects of local infection, which I would also instance, is one of a child who received a scratch on the leg from riding a velocipede. No attention was paid to it until a fungoid growth began to develop along the wound. Auto-inoculation of the pus in the vicinity gradually led to the development of new granulomata until a large portion of the lower third of the leg became implicated. The patient was subjected to internal treatment and oxide of zinc ointment for some two months before he came under my care. The lesions were then perfect fungoid growths, or what is usually called granuloma, with a number of small pustules in between the granulations. The parents, objecting to surgical procedure, a very strong antiseptic, the compound tincture of iodine was used, and it required only one week to remove the entire growths, no internal treatment whatever being given.

In conclusion, I would only state that my views are entirely in accord with Dr. Holsten's, and from my standpoint I cannot but state in the strongest manner, that dermatology should be dealt with from a modern standpoint of view, and that the current ideas that all the diseases are due to specific internal causes should be utterly cast aside. On the contrary, a very large and perhaps major portion will be found entirely local and external in origin, requiring only local and external means for their cure.

Dr. SHERWELL:—Dr. Holsten did me the honor to call a day or two since, mentioned title of paper of this evening to me, and asked me to be present to discuss it. I am sorry that an important engagement has caused me to lose one-half my pleasure, at least. I am not naturally, and I believe scientifically, able to speak on it as the gentleman, Dr. Elliott, who has just closed; still, I would like to add a few words on the subject, as I cannot quite agree with his remarks *in toto.* It would have greatly interested me to have listened to the points referred to in the first part of the paper, relating to parasitic origin and nature of skin diseases, so commented on by Dr. Elliott, and of which theory he is so earnest and able an advocate. The doctor represents a large section of dermatologic thought in his opinions on the subject of micro-organisms and their influence upon the skin, a certain amount of which no one would want to contradict. But when the doctor goes on to assume that all, or perhaps more correctly, that most cases of eczema have their origin in external parasitic conditions, rather than in some other conditions which are due to constitutional or diathetic causes, or aberrance of function, traumatism, etc., I am driven to protest. I must differ with him, and as I judge, also, the author of the paper; and there are a great many other gentlemen of considerably greater eminence in the dermatological world who do also differ.

In connection with the row of cases, of which he, Dr. Elliott, has spoken, I think any one may take a series of cases of such small number and produce similar results with entirely different treatment. The number is too small. As for instance, to take the acne type, it may well be asked, if parasitic alone, why do they take only the developmental stage of life for their appearance, and why should the parasite be only, or to put it very mildly, most active then? Were I given my choice between constitutional remedies and local ones to be used alone, I think I should prefer the former.

I am inclined to think that most advances in medicine and many in surgery, are results of empiricism more or less wise; though I do not want to be considered as saying anything unsympathetic or unscientific on the question of bacteriology in medicine. Empiric medicine is stumbling perhaps all the time, but stumbling forward. The reason for an already ascertained fact in medicine is often afterward proven by microscopy, and its pathology defined by the same medicine. Speaking of dermatological remedies for instance, I think the more or less accidental discovery by Balmanno Squire, of the virtues of the active principle of goa powder, chrysophanic acid, far exceeds that of all of the synthetic remedies up to date, as resorcin, etc., valuable as that named is, and others are.

Microscopical pathology is a curious thing, and we seem to have to revise our opinions every twenty years, or less. To go to Virchow for instance, who would have been bold enough to dispute his pathology of inflammation about that time ago; then Cohnheim comes and reports it, and is trusted; now Baumgärtner comes sustained by others, and succeeds in impressing some good authorities at least with the notion, that at least as regards some of the tissues, Virchow was right.

We know how about eighteen months ago, an assertion that Koch (that learned and careful man whom we all respect) did not know it all, would have been received. Lupus, according to his dictum was tuberculosis of the skin, and the very thing in which to demonstrate his theory. Lupus we know now it did not succeed in curing; some of us think still it is not a tuberculosis of the skin.

Doctor McGuire, of Washington, succeeded by a series of printed questions, in eliciting the opinions of about, I think thirty-four or thirty-five men of ability, dermatologically, in this and other countries. Nineteen of these were in the affirmative, that is, they were convinced with more or less positiveness that lupus was tuberculosis cutis; the other fourteen were of the opposite opinion. I think it is fair to say in view of the eminence of the individuals, that in weight of opinion, it would be about a tie. It must be remembered too that this series of questions was propounded in the spring and summer of 1890. Published in "Morrow's Journal" in fall of '90 or spring of '91—just when the treatment of Koch was first promulgated, etc., with all its attendant *éclat*.

To come back to the concluding portion of Dr. Holsten's paper, I am gratified to agree with him in many of his conclusions. In what he says relating to the action of sulphide of calcium, I certainly agree, I have never found benefit from its use. I think most of his therapeutic suggestions are valuable and well founded; though somewhat differing with him in the reasons for their use and efficacy. I have had already in my writings to put myself "in evidence" as a believer in the frequent involving of the internal organism and in eczema, acne and the like. Every one who knows Dr. Elliott has an earnest respect for his great talent and industry, as also for the writer of the paper, but there is some fighting to be done before we shall all be convinced that antibacteric treatment is the only and one thing needful.

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EDITORIAL.

LINACRE AND CAIUS.

We give our readers in this number of the JOURNAL the portraits of Linacre and Caius, with short sketches of the lives of these two great men, great not only from the professional standpoint, but also from having been very intimately connected with the revival of learning in Europe, and the introduction of the Latin and Greek classics into England, and with the first establishment of a rational practice of medicine in that country.

Besides lecturing on medicine at Oxford, Linacre was the first to teach the Greek language in that University (Sir Thomas Moore was one of his pupils), a novelty which is said to have rent that celebrated seat of learning into violent factions, that frequently came to blows. Besides introducing the study of Greek into the University, Linacre founded two medical lectureships at Oxford, and one at Cambridge, as noted in the biographical sketch, besides securing the charter and organizing the Royal College of Physicians.

Caius was a man of similar tastes, acquirements, habits and character. He was Linacre's worthy successor as President of the College of Physicians; he became, like Linacre, court physician. They were both masters of the Greek language, with which there were few at that time conversant, and both translated from the works of Galen, and other classical authors.

Previous to the time of these men the state of the medical art was very low in England. By no competent legal restraint was its exercise restricted to competent practitioners; but engrossed by illiterate persons, chiefly monks and empirics, whose impositions upon the public were practiced with impunity. We quote from the charter of the Royal College of Physicians: "Before this period a great multitude of ignorant persons, of whom the greater part had no insight into physic, nor in any other kind of learning; some could not even read the letters on the book, so far forth, that common artificers, as smiths, weavers, and women boldly and accustomably took upon them great cures, to the high displeasure of God, great infamy of the faculty, and the grievous hurt, damage and destruction of many of the king's liege people."

Both Caius and Linacre wrote principally in Latin; but one of the most singular of Caius' works was written originally in English, being designed for the instruction of the common people. The quaint simplicity of the language of that day, more than three centuries past, sounds strangely in modern ears. But the work itself forms a very curious article in the annals of medicine, and relates to a pestilence which infected England at various periods, committed great ravages, and was attended with some remarkable circumstances. A few quotations from the book may be interesting not only as an example of the distinguished author's style of expressing himself in "English as she is wrote" at that period, but also as giving an interesting description of miliary fever as it appeared at that time. The title of the work is "A Boke, or Counseill against the disease commonly called the Sweate, or Sweatyng Sicknesse. Made by Ihon Caius, doctour in physicke. Very necessary for everye personne, and much requisite to be had in the handes of al sortes, for their better instruction, preparation and defence, against the souddein comyng and fearful assaulting of the same disease."—12mo, 1552.

The author makes an apology for writing his treatise in English, "For," says he, "the commoditie of that which is so written, passeth not the compasse of England, but remaineth enclosed within the seas. But as this disease is almost peculiar to us Englishmen, and not common to all men, following us as the shadowe the body, in all countries, albeit not at all times; therefore compelled I am to use this our English tongue, as best to be understood, and most needful, to whom it most behoveth to have speedy remedie."

The "Sudor Anglicus" is described as an extremely violent fever, which began after a short chill, with cardialgia, headache and lethargic stupor, destroyed the strength at the inset, and ended in twenty-four hours. Excessive perspiration and rheumatic pain were its characteristic symptoms. The disease was first disseminated in England, after the battle of Bosworth, by the army of the victorious Henry, in August, 1486, a year distinguished by extremely wet weather. The mortality was frightful; eighty to ninety per cent., and often more, of those affected died. Caius describes the disease and gives its history with characteristic minuteness, but his treatment of it is perhaps the most interesting. It turns upon the sole idea of promoting the sweat. On this point he is peremptory. "If two be taken in one bed let them so continue, although it be to their unquietness; for fear whereof, and for the more quietness and safety, very good it is during all the sweating time, that two persons lie not in one bed." To promote perspiration they are ordered to drink "posset ale, made of sweet milk, turned with vinegar, in a quart whereof parsley and sage, of each half, one little handful, hath been sodden, etc." If under this treatment, loaded with bedclothes, and almost stifled with heat they happen to feel faint, "cause them," says the doctor, "to lie on their right side, and bow themselves forward, call them by their names, beat them with a rosemary branch, or some other sweet little thing; do not let them on any account sleep, but pull them by the ears, nose, or hair, suffering them in no wise to sleep, until such time as they have no lust to sleep; except to a learned man on physic the case appears to bear the contrary. If under this discipline they happily recover, and find their strength to be sore wasted, let them smell an old sweet apple, and use other restoratives of similar efficacy; for there is nothing more comfortable to the spirits than good and sweet odours."

Caius enumerates many causes of the disease, but chiefly shows why it attacks the English more than any other nation. "The reason is none other than the evil diet of the country, which destroyeth more meats and drinks, without all order, convenient time, reason, or necessity, than either Scotland, or all other countries under the sun, to the great annoyance of their own bodies and wits, hindrance of those who have need, and great dearth and scarcity in the commonwealth, wherefore if Esculapius, the inventor of physic, the saver of men from death, and restorer to life, should return again to this world, he could not save these sorts of men." In corroboration of this he remarks: "Those who had the disease, sore with peril or death, were either men of wealth, ease and welfare, or of the poorer sort, such as were idle persons, good ale drinkers, and tavern haunters; the laborious and thin dieted escaped." This curious English book the author afterwards revised, and put into a more scientific form, and into the Latin language, and published it in 1556, under the title "De Ephemera Britanica."

HYGEIA PARK SANATORIUM.

The advantages of the sandy soil of the middle of Long Island, with its pines and refreshing breezes, are attracting the attention more and more every year of the sanitarian and the capitalist. Those who have never visited Brentwood will be surprised at the evidences of development and growth which are to be seen on every hand in the private residences and especially in the Austral Park Hotel, which is one of the finest structures on the Island. Immediately adjoining this property is that of the Hygeia Park Sanatorium Company, the prospectus of which has been widely sent to the profession of both cities. It is proposed to establish here a sanatorium for the treatment of incipient phthisis, nervous diseases, dyspepsia, liver troubles, etc., on the cottage plan, much after the system which Dr. Trudeau has found to work so satisfactorily in the Adirondacks, and which has been so successful at Falkenstein and Görbersborf. That there is need of such a place to which suitable cases can be sent is, we think, the experience of all physicians. The feature in the enterprise, which seems to us the most promising, is that patients are to be *treated*, and are not to be left to their own ideas of what is adapted to their individual cases. Too much reliance is now placed on change of air and scene, and too little on the medical and hygienic care of the patient, the consequence being that many who go away from home for the restoration of their health return, if ever they do, but little benefited, if, indeed, they are not made worse.

PHYSICIANS' BUREAU OF SERVICE AT THE WORLD'S FAIR.

The World's Fair at Chicago would poorly represent the progress made in this country since its discovery did it not contain in many and varied forms the products of the art and science of medicine, and other evidences of the enterprise of manufacturers of medical appliances. Among the attractions which will be found there will be a physicians' bureau of service and information, to be operated by the well-known firm of Truax, Greene & Co. The services which are offered, without cost, to those members of the profession who may visit the Exposition are postal benefits, banking facilities, interpreters, telegraph, telephone, baggage and freight service, etc., etc. In short, physicans may register at the bureau, and make it their head-quarters during their visit.

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EPITAPHS FROM THE TOMBSTONES OF MEDICAL HISTORY.

Under the above title have been issued in a form both elegant and convenient for preservation, the portraits of the Fathers of Medicine, reproduced from the unique collection of engravings in the library of Dr. Joseph H. Hunt. These portraits, with sketches of the lives of these worthies, written by Dr. Hunt, have appeared in the JOURNAL during the past year, and form the first series. The second series commenced with the present volume, and will be continued throughout the year. The editors of the JOURNAL take this opportunity to thank Dr. Hunt for the great treat which he enables them to monthly spread before the readers of the JOURNAL.

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OBITUARY.

CHARLES EUGENE DE LA VERGNE, M.D.

The death of Dr. De La Vergne removes from our midst one of the most active members of the profession, and one who had endeared himself to his fellow practitioners by his many and varied qualities. To few men of his years were the prospects of a successful and useful life brighter or more certain. The manner of his death was one which does honor to the vocation which he had selected as his life's work. In attendance on his niece, during a fatal attack of diphtheria, he contracted that disease, which invaded the pharynx to such a degree as to require removal of the uvula in order that air might enter. The larynx escaped, but the force of the disease was spent on the lungs, the membrane invading the bronchial tubes and producing death in less than a week of great suffering. His death occurred on June 4th, and in accordance with his wishes his body was cremated at the Fresh Pond Crematory on June 6th.

Dr. De La Vergne was born in Brooklyn and received his academic education at the Polytechnic Institute. His medical degree was obtained at Long Island College Hospital in 1878. He had repeatedly occupied the position of Councillor of the Alumni Association of that institution and had been its President. He was for a considerable period Secretary of the Medical Society of the County of Kings and a member of the Kings County Board of Pharmacy, and had also been surgeon of the Thirteenth Regiment, N.G.S.N.Y.

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PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society rooms, No. 356 Bridge Street, Tuesday evening, May 17, 1892, at eight o'clock.

The President, Dr. Z. T. Emery, in the chair.

The minutes of the April meeting were read and approved.

The Council reported favorably upon the names of Drs. J. H. Lawrence, R. C. F. Coombs, George E. Reed, Edward Morgan, A. L. Sherman, Charles D. Napier, Henry T. Hotchkiss and A. H. Staub, and recommended that they be elected to membership.

The following were declared elected: Drs. Joseph C. Leiter, Constantine McGuire, Smith E. Jelliffe, and Evan F. Smith.

The following gentlemen were proposed for membership:

Dr. Frederick C. Holden, 877 Union Street, University of New York, 1892; proposed by Drs. H. B. Delatour and W. M. Hutchinson.

George Everson, 125 Willoughby Street, Dartmouth Medical College; proposed by Drs. J. H. Raymond and George McNaughton.

Jennie W. Farrell, Blytheburn, L.I., Woman's Medical College, Philadelphia; proposed by Drs. Z. T. Emery and W. M. Hutchinson.

SCIENTIFIC BUSINESS.

The following papers on the subject of "Appendicitis" were read: 1. "Ætiology and Pathology," by J. M. Van Cott, Jr., M.D. 2. "Symptoms and Diagnosis," by W. J. Cruikshank, M.D. 3. "Medical Treatment," by Glentworth R. Butler, M.D. 4. "Indications for Operation," by J. Bion Bogart, M.D. 5. "Operative Technique," by H. B. Delatour, M.D. 6. "Report of Three Cases Treated Successfully Without Operation," by George G. Hopkins, M.D.

Discussion by Drs. Robert F. Weir, of New York, George R. Fowler, and L. S. Pilcher.

UNFINISHED BUSINESS.

The committee appointed to arrange for the entertainment of the American Gynæcological Society reported progress.

On motion, the meeting adjourned.

W. M. Hutchinson,
Secretary.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,
Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

TREATMENT OF SYPHILITIC STRICTURE OF THE RECTUM BY EXTIRPATION.

Quénn (Bul. et Mem. de la Soc. de Chir. de Paris, vol. xvii., p. 140). The results of the old treatment of syphilitic stricture of the rectum by dilatation by means of bougies or by rectotomy have always been unsatisfactory. Nor could extirpation of the rectum, though repeatedly recommended and performed in Germany, thoroughly satisfy the surgeon as long as the patients were condemned to permanent incontinence. Kraske's method of preserving the sphincters in the treatment of rectal ulceration and stricture was a decided step in advance. For lower stricture without extensive ulceration above, resection of the coccyx and sacrum is unnecessary, incision of the soft parts being sufficient. I communicate a case in support of the favorable results occurring with this treatment in which after seven months the tissues presented a normal appearance; no recurrence; perfect continence.

NOTE UPON METHYLE CHLORIDE.

Beigonnet and Naville (Paris, 1890). Methyle chloride is frequently employed as a local anæsthetic. It is most successfully used in cases of sciatica of long standing, in different forms of rheumatism, lumbago, hyperæsthesia and pleuritic pains. It is applied on portions of the skin by means of syphon-like apparatus by the manufacturers. A temperature of 20° below zero is obtained, which is very soon followed by a powerful reaction in an extensive area of irritations of the skin which may arise from the use of methyle chloride (blisters, pigmentation, etc.,) can easily be avoided by careful administration. To produce anæsthesia for smaller operations, tampons saturated with the agent and applied are sufficient.

OPERATIVE TREATMENT OF PES TALUS PARALYTICUS.

Eugène Rochard (Rev. de Orthop., 1891, No. 5). Two methods are employed: The shortening of the tendo Achillis by excision of a portion of the same or by an oblique incision and attaching both portions to each other, followed by the transplantation of tendons by the blending of the peronei with the insertion of the tendo Achillis. The shortening of this tendon by Walsham's and Willet's method was almost completely successful in seven cases; in no case was there a complete failure. However, the period of observation was not long enough in these cases. Gibney by oblique separation reached quite excellent results in seventeen cases —in eight cases, satisfactory results,—and in but three cases was he unsuccessful. Kirmisson also obtained a good result in a similar case. The author modifies the latter process by adding a lateral freshening to the simple lapping over each other of the separated parts of the tendon, thus increased chances of union with shortening being offered. Which of these methods is to be preferred is to be determined by a careful examination of the individual muscles. If the gastrocnemius, plantaris and soleus are only atrophic and not completely paralyzed, the anomaly being exclusively caused by an exceedingly strong tension of the tendo Achillis, simple shortening is to be recommended. But if the muscles are completely paralyzed,—which, however, occurs but rarely, it almost without exception following infantile paralysis—the transplantation of tendons is to be employed in order to connect the peronei. Arthrodesis is to be employed only in clear cases of dangle foot. The good results of the operation are, of course, lessened by secondary changes in the plantar arch by retraction of the plantar fascia, etc. *A priori*, however, the idea (Fayette Judson) that a weakened muscle must not be allowed to act as it may be injured thereby is to be abandoned.

PERMANENT ANTISEPTIC IRRIGATION.

Edward V. de Meyer (Deutsche Zeitschrift für Chirurgie, vol. xxxi., p. 407). The author who was for two years an assistant in the septic department of the Heidelberg clinic, reports eleven cases treated by means of antiseptic irrigation during that time. The patients were suffering from severe gangrenous conditions following severe injuries, such as compound fractures, etc., and in whom dangerous septicæmia was present—and consequently amputation or resections inevitable. The good effect of the treatment was shown by its influence on the general condition—improvement in pulse, abatement of fever, as well as by the favorable change in the wounds, clearing of the phlegmonous cavities of the stumps after amputation, etc. Only two of the patients treated died, one of tetanus, the other of septic embolism.

For irrigation a one per cent. solution of acetate of alumina is used. About sixty litres of the fluid were allowed to irrigate the wound in twenty-four hours. The patient's bed is protected against wetting by the use of divided mattresses. The fluid is led to the wound through a small serpentine metal tube, perforated by numerous small holes and attached to the end of a rubber tube. Beside the antiseptic irrigation for the purpose of cleaning the wound, iodoform was freely used, and while the general septic appearance existed, strong alcoholics (sherry, cognac, etc.) were administered in abundance, the author laying great stress upon this point.

GASTROSTOMY IN CASES OF CARCINOMATOUS STRICTURE OF THE CARDIAC ORIFICE.

Dr. Carl Lauenstein (Centralblatt für Chirurgie, vol. xviii., No. 27, p. 513). The advantage offered by fistula of the stomach in cases of carcinoma of the œsophagus or cardiac extremity of the stomach depend upon the condition of the fistula and of the stomach itself. The fistula should permit of the ready introduction of food, and also retain the gastric juice and chyme in order that its edges may not become excoriated from the pouring out of its contents. Experience shows that a small fistula affords the best results. The stomach must not only retain the food, but digest it. These two demands are, as a rule, fulfilled, even when carcinoma attacks the lower extremity of the œsophagus, excepting occasional disturbances in the chemical conditions, as the absence of the hydrochloric acid in the gastric juice.

A very different condition was shown in two recent cases of Lauenstein's where not only was the passage to the stomach obstructed by carcinomatous distress of the cardiac orifice, but the stomach itself was involved. The gastric mucous membrane was deprived of the physiological qualities necessary for digestion and no food could be retained. In addition, the shortening of the carcinomatous stomach may be so considerable that the stomach may be closely adherent in its original position by means of attachments of the cardiac tumor, that it will be found impossible to secure a portion of its anterior wall to the wall of the thorax or abdomen. Lauenstein reports a case of carcinomatous obstruction of the cardiac extremity in which he failed to approximate the wall of the stomach to the fistula, established by Haems' method in the anterior part of the eighth intercostal space.

Lauenstein disapproves of the establishment of a fistula in cases of complete obstruction of the cardiac orifice resulting from carcinoma. He recommends nourishment per rectum exclusively in these cases. The following are diagnostic points in obstruction at this point by the presence of a carcinomatous tumor. Von Harleer's measurements show that the distance between the upper front teeth and the cardiac orifice is thirty-eight to thirty-nine centimetres in women, and forty to forty-one in men, hence lesions at this point are diagnosed if the obstruction begins from thirty-eight to forty-one centimetres, beyond the upper dental arch. In two of Lauenstein's cases the exploring instrument met the obstruction forty-two and forty-two-and-a-half centimetres beyond the upper teeth. In both cases no traces of blood were found on the instrument, while in carcinomatous affection of the œsophagus, especially after repeated examinations, blood is usually found. In a second case a loud systolic noise was apparent in the epigastrium below the ensiform cartilage simultaneous with the radial and femoral pulse, the heart sounds being quite normal. This symptom is explained by the probable presence of a tumor pressing upon the aorta, (a post-mortem examination revealed a tumor the size of the fist attached to the spleen).

LUECKE'S METHOD OF TREATING ERYSIPELAS.

Winkler (Wiener med. Wochenschrift, No. 46–48, 1891). The method of Luecke consists of the application of rectified oil of turpentine with a brush or small compress with stroking movements from the healthy toward the diseased portion several times daily; the séances should not exceed five in the twenty-four hours. In the after-treatment, following each séance, the parts are covered by cotton wadding held in place by a bandage. The parts are thoroughly cleansed in the beginning with ether or alcohol. Excoriations are covered with sublimated lanolin. Twenty-two cases are reported, showing an average of five days elapsing between the first application and the desquamation marking the subsidence of the disease. The benefit derived is said by the author to depend upon the ozone present in the oil of turpentine.

THE TREATMENT OF ANCIENT LUXATION.

Thiery (Gaz. des Hôpitaux, 1891, No. 136). Thiery suggests that the expression "ancient" be replaced by "irreducible" luxation. In considering the measures to be employed in this class of cases he reaches the following conclusion: First. Under anæsthesia trial of manual reposition is to be made. Second. Forcible measures may be tried if manipulation fails. Third. Tenotomy is useless in this class of cases. Fourth. Arthrotomy is, as a rule, the operation of choice, particularly in luxations of the shoulder. Fifth. Resection, especially in combination with the artificial formation of acetabulum, is to be preferred for the hip-joint; in the shoulder-joint it may likewise be useful, but should be preceded by a trial of arthrotomy. Sixth. Osteotomy and osteoclasis have succeeded in a few cases of a desperate character; they are rarely indicated however. Seventh. At the present time there can be no justification for amputation, which was in former times resorted to upon occasion.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children, and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief to the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

Dürhssen (Centralblatt, Feb. 20, 1892). The Löhlein and Olshausen statistics emphasize the statement that twenty-five per cent. of all eclamptic patients, whether seized before or after birth, fall a victim to the disease. According to Winckel twenty-three per cent. of the mothers and about half the children die. To reach a rational basis for the treatment of this disease, two questions require to be answered.

1. Do the eclamptic attacks cease with the termination of labor?

2. Does operative interference aggravate the prognosis?

The first question is answered negatively by the older statisticians, affirmatively by later authorities. This difference of opinion is explained by the fact that the older statistics (also those of Brummerstadt and Shauta) are based on cases in the larger majority of which the delivery was accomplished without an anæsthetic, and in which the beneficial effects of emptying the uterus were more than offset by excentric irritation involved in the operative interference. The old text-book dogma that artificial delivery aggravates the attacks is untrue, provided the operation is conducted under full anæsthesia. Artificial delivery in eclampsia should always be conducted under chloroform narcosis to the surgical degree. Statistics show that in labors so terminated the eclamptic attacks cease with the birth of the child in from seventy to eighty per cent. of all cases. No true eclamptic cases terminated by operation show a higher mortality than those spontaneously delivered. Yet operated cases comprise those which are primarily most unfavorable. Death comes rather in spite of the interference than because of it. Lantos statistics show that cases operated, after an average of not more than four attacks recovered, while after sixteen they died. Most of the latter died of sepsis ; they belong to the pre-antiseptic period.

Immediately on the diagnosis of eclampsia the severest operations are justified (under narcosis), provided they can be performed without danger to mother or child. Early delivery is especially indicated, for the reason that after a small number of attacks a fatal cerebral hæmorrhage or fat embolism of the lungs (Virchow) may develop. That the gravest operations do not aggravate the eclamptic seizures when performed under anæsthesia is shown by the results of Cæsarean section in puerperal convulsions. Of eleven cases so delivered the attacks ceased on delivery in ten. Four died, all but one from causes other than the operation.

Notwithstanding these facts the author is not an advocate of Cæsarean section in eclampsia. It is too dangerous to the mother. It is a laparotomy and as such will at the best be attended with a mortality of five per cent. while delivery *per vias naturales*, if properly conducted, is wholly without danger.

When dilatation is not promptly accomplished the author advocates deep cervical incisions. He has operated in twenty-six cases by this method, losing none of the mothers and but two of the children, and these by asphyxia. After the cervical incision forceps delivery was practiced in twenty-one, version in three, ordinary breech extraction in two. No hæmorrhage occurred worthy of mention. This procedure is applicable when the os internum is effaced.

In the rare cases in which the cervix persists after the onset of convulsions the author advocates forcible dilatation of the cervix.

This method is applicable not only at the beginning of labor but before labor begins. If the cervix admits a single finger the colpeurynter can be introduced into the uterus. This method is better than the more gradual induction of labor in eclampsia. The slow process of induced labor as practiced in other cases is here dangerous to the mother. The operation is not to be delayed till the woman is *in extremis,* but may be done immediately on the first attack. Finally, the author proposes immediate evacuation of the uterus on occurrence of eclampsia after the eighth month by one of the three methods already mentioned, viz.: cervical incision, mechanical dilatation, or the combination of both methods. Before the eighth month he is more inclined to rely on medicinal treatment.

DISCUSSION.

Olshausen agreed with the author that the termination of the birth resulted in most cases in cessation of convulsions, and concurred in the author's views of the necessity for speedy delivery, but with the proviso that it should be possible without serious traumatism.

The method for dilatation practiced by Tarnier and Barnes he thought simpler, and therefore to be preferred. He would have the indications for Cæsarean section in eclampsia clearly defined.

Mackenrodt did not consider the incisions of Dührssen entirely free from danger. He had seen two cases at the hands of general practitioners in which after making the incisions they were unable to control the hæmorrhage by suture. Moreover, he had frequently seen a parametritis follow at the polyclinic of A. Martin in spite of the strictest precautions. Within a year he had lost a patient by embolism after delivery by Dührssen's incisions. The treatment he thought should be restricted to exceptional cases.

Van Der Mey related a case of Cæsarean section in eclampsia. The child lived five days, the mother making a good recovery.

Czempin said that Dührssen's method had not changed his pessimistic views of the prognosis of eclampsia. Cases of eclampsia in which labor sets in actively after the onset of convulsions have a fairly favorable prognosis. If one wishes to shorten the spontaneous birth he may make incisions. He believed, however, that the prognosis was not favorably influenced by this practice. He favored the use of chloroform and waiting for spontaneous dilatation.

Cases in which the eclamptic attacks appear in pregnancy, follow each other in quick succession and continue days with little or no dilatation of the cervix seldom recover. Whether in these cases D.'s proposition to use the colpeurynter would be an advantage, remains to be seen. This class of cases are almost always fatal even after evacuation of the uterus.

Bokelmann was opposed to the universal adoption of Dührssen's method. He did not doubt its utility in exceptional cases, but thought D. too sanguine in regard to the value of measures of his own device.

Gusserow thought D.'s treatment in severe cases a great step in advance. The unfortunate results which Mackenrodt related, Gusserow had never seen. Their importance in comparison with the danger of Cæsarean section was scarcely worthy of mention.

FISSURED NIPPLES.

Vinay (Wien. med. Presse) commends the use of aristol in cracked nipples. He uses a twenty per cent. ointment, applied after nursing. The fissures are held open during the application to bring the medicament in contact with the entire wound surface.

SEPSIS OF THE UMBILICAL WOUND.

Eröss (Arch. f. Gyn., B. xii., H. 3) observed the process of healing of the umbilical wounds in 1,000 new-born infants under different modes of treatment. A strictly normal course was the exception rather than the rule. Morbid conditions of greater or less gravity were found in sixty-eight per cent. These consisted in sloughing of the stump, softening instead of complete mummification, decomposition of fragments left undetached after the rest had separated, suppuration and gangrene. Pyrexia occurred in 220 cases and in a certain proportion of instances was the only evidence of septic absorption.

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GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

HYDROSTININE IN UTERINE HÆMORRHAGES.

Emanuel (Therapeutische Monatshefte, Dec., 1891) relates results which differ somewhat from Falk. It was administered in gelatine capsules $^3/_8$ gr. hydrochlorate of hydrostinine every six hours, to be decreased in frequency as hæmorrhage abated. From six to twelve doses were usually required. If twelve doses were not effectual its use was discontinued. Of the forty-eight cases, the cause of the bleeding in twelve was disease of the adnexa. In five of these cases the hæmorrhage was promptly arrested, in from twenty-four to thirty-six hours. In three cases the result was not so good, and in two it was ineffectual.

In cases arising from forms of endometritis the effect was negative in one case, in twelve it was promptly efficient. In those cases associated with retroversion, longer time was required for it to control the bleeding.

In four cases of myoma of the uterus it was inert. In the eleven remaining cases the hæmorrhage was of congestive origin. In two cases of profuse hæmorrhage at first menstruation after confinement, its efficacy was demonstrated, and in two cases of increased menstruation following abortion its use was not effective. In five other cases in which the congestive cause was supposed to be operative the results were good in three and negative in two. Emanuel concludes that this remedy acts upon the small vessels of the mucosa, whereas ergot exerts its influence upon the smooth muscular fibre. It is not, therefore, indicated in post-partum hæmorrhage or that of abortion. No disagreeable symptoms were observed from its use.

TREATMENT OF CHRONIC ENDOMETRITIS.

Duke (London Med. Record, March, 1890) has obtained excellent results in chronic endometritis by applying boracic acid to the endometrium by means of a slightly curved vulcanite tube, rather larger than a No. xii catheter. The tube at its terminal end is charged for two inches, and emptied by a piston. Many cases of this variety have been cured. D. thinks most ordinary cases should yield to a dozen applications. The acid acts as an antiseptic astringent and deodorizer.

GLASS ROD IN PERITONEAL CAVITY.

Wylie (Med. Record, May 7, 1892) relates a case of laparotomy for removal of tube six inches long by one-third of an inch thick, in an unmarried woman, aged 25 years.

About six weeks after pregnancy the rod was introduced into the os uteri and escaped into the uterus. Six weeks subsequent to this she miscarried, and a little less than three weeks after the tube was found in the left lumbar region. The left tube and left ovary were found diseased and removed.

INCLINED DECUBITUS.

Emmet (New York Journal of Gynæcology and Obstet., February, 1892). E., after reviewing his teachings as to rest and the inclined position, declares that in his judgment there is "scarcely a condition of disease of the female pelvis which is not benefited to some extent by maintaining a recumbent position, with the foot of the bed elevated from twelve to eighteen inches." The lesser elevation is of little value. By this method he has cured several cases of tubal lesion and he has observed prompt relief in allaying the constant irritation of the bladder associated with local peritonitis about the retro-sacral ligaments.

He believes this method, combined with the rest cure of Weir Mitchell, will accomplish excellent results in functional disturbance of the genital organs. He relates a case of great interest—one of pus tube—where there was discharge of pus from the vagina, with frequent rigors and rise of temperature.

The right tube was distended with pus, and as large as the wrist, lying behind the uterus, which was crowded well forward against the bladder. The uterus was fixed in position, and as he had just treated a case where cure was effected without an operation, he had less reluctance in giving her the benefit of delay. Almost immediately on her being put to bed, with the foot of the bed elevated eighteen inches, a free and continuous pus drainage was established through the uterine canal.

Within a week she ceased to have any afternoon rise of temperature and she was allowed to get up. Twice this was attempted, but the escape of pus ceased, with increase of pain and a return of the rigors, with elevation of temperature. She was, therefore, kept on the inclined plane for five weeks, the discharge gradually diminished, when circumstances made it necessary for her to return to her home. It was then found that this tube had returned to its normal position, and was about the size of the little finger, and the tube was much more movable.

E. trusts that the use of the inclined plane will prove as valuable to others as to himself, but says too much should not be expected of it.

AN IDEAL DRESSING FOR ABDOMINAL WOUNDS.

Kelly (Am. Jour. of Obstet., Dec. 1891). An ideal dressing should be a paste, which would harden quickly—thin, flexible, transparent, impenetrable, which would hermetically seal the wound from external septic invasion.

"After closure of the incision, the skin, the line of the wound, and the sutures are dried, and two layers of sterilized gauze or cheese-cloth, large enough to project five to ten centimetres (two to four inches) beyond the incision on all sides, laid on the skin.

This is saturated with the following adhesive mixture, which is evenly distributed over the whole surface:

"℞ Squibb's ether, or washed ether, and alcohol, absolute, equal parts;
Bichloride of mercury (Merck's recryst.), enough to make the solution $\frac{1}{16000}$;
(Anthony's) snowy cotton, enough to make a syrupy consistence, added in small pieces, stirring.

"As soon as this is poured over the wound evaporation begins to take place at once, and the celluloidin hardens, gumming the gauze fast to the skin. To avoid delay in waiting for this to grow quite hard, and to prevent adhesion to the cotton applied above it, the whole surface is freely dusted over with a finely powdered mixture of iodoform and boric acid:

"℞ Pulveris iodoformi, 4 grammes, or 1 drachm;
Acidi borici, 28 grammes, or 7 drachms.
M.—Exactissime. Sig.—Dust freely on wound.

"This powder is of itself an invaluable protective. I use it constantly in obstetric cases, separating the labia and throwing it into the vagina, where it acts as a guard to the vaginal outlet against septic invasion from without.

"The wound thus sealed with celluloidin gauze may be left untouched for a week or more, when the dressing should be softened with water, or more rapidly with ether, the gauze lifted off, and the stitches taken out."

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DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,
Attending Physician, Department Throat and Nose, Dispensary of L. I. C. Hospital; Instructor in Diseases of the Throat and Nose, New York Post-Graduate Medical School and Hospital.

SUPPURATIVE OTITIS AND CEREBRAL SYMPTOMS AFTER PLUGGING POSTERIOR NARES FOR EPISTAXIS.

Gellé (Jour. Laryngol. and Rhinol., vol. vi., No. 1). Tamponing of the posterior nares may not only cause suppurative otitis, but may endanger life.

The frequency of otitis from this source depends upon the length of time the tampon is allowed to remain *in situ*. It has occurred two days after insertion of plug.

Blood may have entered the ear before introduction of tampon, or hæmorrhage may occur in Eustachian tube. The otitis may be primary and hæmorrhagic, or it may be secondary and infectious. In both events the tampon is condemned. In the first, the exit of blood in Eustachian tube is opposed by pressure of tampon, and in the second it facilitates the entrance of pus into an unaffected ear.

The cerebral danger is absorption of septic material and inflammation. Chatellier believes that posterior tamponing is never necessary, bleeding occurring always from anterior portion of septum.

Lubet-Burbon claims that ninety per cent. of cases of epistaxis is limited to anterior part of septum.

Luc advocates use of antiseptic (iodoform) plug in cases of surgical interference which may have caused hæmorrhage. Gouguenheim deprecates use of Bellocq's sound, as it might cause additional injury to mucous membrane, advises introduction of soft rubber sound. Gellé has used successfully subcutaneous injection of ergotin, in cases of obstinate and profuse hæmorrhage.

CYST OF THE MIDDLE TURBINATED BONE.

Charles H. Knight. This condition affects the special sense of smell, the drainage of upper nasal fossæ, and may also be the cause of various reflex phenomena. The cysts are rarely large enough to interfere with the respiratory functions of the nose. The subjective symptoms are impairment of smell, persistent headache, neuralgia of fifth nerves, and some obstruction. On inspection the mucous membrane may appear atrophied, the tumor is firm and unyielding to touch, a considerable discharge of mucus into post-nares generally present. A case has been reported by Schaffer of cystic involvement of inferior turbinated, and one by Bayer of the superior turbinated; none have come under the author's observation.

This condition is frequently associated with myxomatous degeneration. Females are more often affected than males, and most of the patients have been past middle life. No case occurring during childhood has been reported.

This condition must be differentiated from osteoma, myxoma and mucocele of the ethmoid cells.

A cross-section of a cyst presents the following microscopic appearances: On outer surface a layer of pavement epithelium, beneath a strata of connective tissue, moderately vascular. Under this a layer of bone of varying thickness, then a lining of loose connective tissue, and covering the inside of the cyst a row of ciliated epithelium. The lesion causing this condition is probably an osteophytic periostitis, following a hypertrophic rhinitis. The bone of middle turbinate curls upon itself until it reaches and adheres to its own base. The external layer of mucous membrane may hypertrophy or atrophy from pressure. The glands on internal surface secrete until cyst cavity is filled to distention, when the atrophic process is initiated. The cyst contents may become purulent. The treatment is entirely surgical, consisting of removal of mass by means of cold wire snare. In case it is impossible to ensnare the growth it may be removed by means of the cutting forceps and scissors. To examine cyst contents, hypodermic puncture is necessary, as the cyst walls are always broken during the removal of the bone. The hæmorrhage during the operation is generally insignificant.

The indications of surgical interference are as follows :

1. Obstruction of nasal respiration.
2. Prevention of nasal drainage.
3. Reflex neuroses.
4. Anosmia.
5. Impaired quality of voice.

CHILDREN AND THEIR DISEASES.

BY FRANCIS HART STUART, A.M., M.D.

GASTRIC DIGESTION IN SMALL CHILDREN, AND IRRIGATION OF THE STOMACH.

Troitsky (Jahrb. f. Kinderheilk., xxxii., 4, abstracted by Dr. T. M. Rotch, "Boston Medical and Surgical Jour." vol. cxxvi., No. 2, p. 33) presents the following propositions :

1. The presence of completely coagulated casein in the stomach does not warrant one in speaking of the excessively acid contents of the stomach, for a precipitation of the casein from the solution can only happen in consequence of the influence of labferment, and this acts in the presence of an alkaline reaction.

2. The change of the casein which has begun to coagulate to the state of solution with subsequent peptonization, is due to the simultaneous action of acid and pepsin, and the stomach takes up the albumen more successfully and completely the more the quantity and composition of the digestive secretions approach the normal.

3. Lactic acid must be regarded as a normal constituent of the gastric juice, at least in very young children, and in those with whom the diet is exclusively one of milk, and its formation is encouraged by milk-sugar, which is abundant in the milk. This constant presence of lactic acid has its effect alike upon the digestive process and upon the action of microbes.

4. Hydrochloric acid plays the principal part in digestion, but its determination is not always easy, because the casein of the milk has the property of holding it until digestion begins. Hydrochloric acid may usually be found in small quantities in the stomachs of very small children. As digestion increases in activity, the quantity of hydrochloric acid also increases.

5. The quantity of acid in the gastric juice of children is relatively very much smaller than in adults, and is conversely as to the quantity of food taken into the stomach.

6. The average time during which the food stays in the stomach of small children is two hours.

7. Slight mechanical, thermic or chemical irritation of the gastric mucous membrane will increase the acidity of the secreted juice, and favor a rapid emptying of the stomach. Alcohol stays digestion, but counteracts fermentation.

8. The part in digestion which is played by the stomach of the child is an important one, even though it does not appropriate all the albumen which comes into it.

9. The anti-microbic properties of the gastric juice are undoubted, and are due to the presence of free acid, especially hydrochloric acid. In consequence of the slight acidity of the gastric juice in the stomach of children, it cannot act as forcibly to retard fermentation as the same secretion in the adult.

10. It has not yet been determined what significance certain micro-organisms have upon digestion.

11. Functional disturbances of the stomach of children are due to changes in the quality and quantity of the gastric juice, the regular exchange in its ingredients being disturbed, or the parts being subjected to physical or chemical changes which are not yet understood.

12. The quantity of gastric juice in the stomach of children may be lessened without necessarily causing an increase of lactic acid, or the appearance of acetic or butyric acids.

13. When the normal secretion of the stomach is deficient, acids are developed which are not suitable for normal digestion.

14. The presence of too much mucus in the stomach may paralyze the digestive activity of the gastric juice, though the latter may be normal as to quantity and as to composition.

15. If too much food enters the stomach, or if it remains there too long, an insufficient quantity of gastric juice will be secreted for its digestion.

16. The majority of gastric dyspepsias in children are caused by the deficiency of hydrochloric acid in the gastric juice. Functional disturbance is rarely caused by excessive secretion of gastric juice.

17. Diseases of the stomach with definite anatomical peculiarities manifest themselves by the presence of an abundance of mucus, serum and inflammatory elements. The more severe the disease, and the longer it lasts, the more conspicuous will be these elements.

18. With inflammation of the gastric mucous membrane digestion is reduced to a minimum, even if the gastric juice remains normal in quantity and quality.

19. Disturbed digestion is accompanied by the appearance of an increased number of fermentation-phenomena, with the formation of acids foreign to the stomach and its work, as well as the breaking up of albumen and the formation of decomposition products. The substances which are submitted to fermentation are the fats and the excess of mucus, which ordinarily do not undergo such changes.

20. A diminution or failure in the presence of hydrochloric acid in the stomach signifies the formation of pathogenic elements in the soil favorable to such development, the anti-microbic power of a sufficient quantity of hydrochloric acid being wanting.

21. It is quite possible that certain forms of micro-organisms, or their products, are responsible for the different diseases of the stomach of children. The means for treating the abnormal condition of the stomach, which has been found extremely efficient in numberless cases, is irrigation.

MISCELLANEOUS.

AN ANTI-HOMŒOPATHIC PRIZE ESSAY.

Dr. G. M. Gould, of Philadelphia, offers a prize of $100 for the best essay showing "The Ridiculous Pretensions of Modern Homœopathic Practice." An essay should not contain over 15,000 words, and in simplicity and directness should be adapted to the commonest lay understanding. Papers should be sent Dr. Gould on or before January 2, 1893, type-written, without the name of the author, but accompanied by a sealed letter, giving the author's name with motto or *nom-de-plume.* The essays will be given to a competent committee, and when their decision is reached the sealed letters of the authors will be opened, and the prize sent the winner. The essay will then be cheaply but well printed in large quantities, and supplied physicians at the cost of printing.

GELSEMIUM IN THE TREATMENT OF A BAD COLD.

Dr. John Aulde, in the "Medical Record," advises the use of gelsemium in the treatment of colds. He says: "Gelsemium arrests profuse nasal secretions, quiets headache and neuralgia, subdues cough and pain, favors a re-establishment of the secretions through its influence upon the skin, kidneys and gastro-intestinal tract. It reduces temperature and pulse-rate, promotes sleep, and creates a feeling of comfort and well-being without in any way approaching narcosis or destroying the oxygen-carrying capacity of the blood-corpuscles. By the use of this single remedy, much discomfort to the patient is avoided, digestion remains undisturbed, nauseating draughts are banished, the necessity for purgatives precluded, and all dangers of subsequent relapse practically eliminated while recovery is prompt, perfect, and satisfactory in every particular. Ten drops of a reliable fluid extract (assayed) are dissolved in three ounces of water, and of this mixture the patient takes a teaspoonful every ten or fifteen minutes for an hour, then at less frequent intervals according to the effects produced. The plan is simple, the medicine harmless, in the dosage recommended, and not at all unpalatable."

INTERNATIONAL DERMATOLOGICAL CONGRESS IN VIENNA.

The second meeting of the International Dermatological Congress will be held in Vienna from the 5th to the 10th of September, 1892. Many of the most distinguished representatives of dermatology and syphilography from all countries have promised to present papers, and the indications are that the meeting will be a great success from a scientific standpoint.

The Committee on Organization, through the President, Professor Kaposi, has extended a cordial invitation to the members of the American Dermatological Association and of the New York Dermatological Society and others interested in dermatology in this country to be present.

The membership fee (five dollars) should be sent with titles of papers intended for presentation to the Secretary for North America, Dr. Prince A. Morrow, 66 West Fortieth Street, New York, or to the Secretary-General of the Congress, Dr. Gustav Riehl, Wien 1-20, Bellaria Strasse 12.

INTERNATIONAL PERIODICAL CONGRESS OF GYNÆCOLOGY AND OBSTETRICS.

FIRST SESSION—Brussels, Belgium, Sept. 14 to 19, 1892.

The following named distinguished gentlemen have been delegated to represent the British Gynæcological Society at the International Congress of Gynæcology and Obstetrics next September: Robert Barnes, Granville Bantock, A. S. Simpson and Lawson Tait.

Great preparations are being made to entertain visiting physicians. His Majesty, King Leopold, will assist at the opening of the Congress. There will be a grand reception by the Belgium Gynæcological Society; gala performance at the Grand Opera; also a banquet by the British Gynæcological Society; garden party in the gardens of the Royal Family, etc.

For all information relating to the Congress address,

Dr. F. HENROTIN, *American Secretary.*
353 La Salle Ave., Chicago, Ills.

BROOKLYN VITAL STATISTICS FOR MARCH AND APRIL, 1892.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population (State census), April 1, 1892, 955,333; Births reported, March, 1,540; April, 1,338; Deaths reported, March, 1,761; April, 1,643.

CAUSES OF DEATH.

March—Croup, 39; Diphtheria, 93; Scarlet fever, 68; Typhoid fever, 7; Whooping-cough, 6; Pneumonia, 284. April—Croup, 27; Diphtheria, 70; Scarlet fever, 48; Typhoid fever, 7, Whooping-cough, 3; Pneumonia, 282.

REPORTED CASES.

March—Diphtheria, 180; Scarlet fever, 445; Measles, 321; Small-pox, 0.; Typhoid fever, 28. April—Diphtheria, 162; Scarlet fever, 365; Measles, 362; Small-pox, 15; Typhoid fever, 25.

DEATH-RATE FOR 1892.

March—Brooklyn, 23.61; New York, 27.22; Philadelphia, 24.67; Berlin, 18.64, Paris, 25.56; London, 21.74. April—Brooklyn, 22.69, New York, 28.20; Philadelphia, 24.62; Berlin, 19.82; Paris, 26.22; London, 22.10.

MARIE FRANCOIS XAVIER BICHAT

Was the son of Jean Baptiste Bichat, a doctor of medicine in the University of Montpellier, and to his instruction Xavier Bichat's early knowledge of medicine is to be attributed. He was born on November 11, 1771, at Thirette, France. He had the good fortune to early become the pupil of Desault, in the Hotel Dieu of Pau, whose celebrity was at that time giving such preponderating influence to the study of surgery in France. The practice was established among the attendants of this surgical course, of pupils being selected each day to make an abstract of the lecture of the previous day, and this was delivered in the presence of the second surgeon. An accident, in a great measure, determined the future fortunes of Bichat, for the pupil whose turn it was to have delivered the abstract of a long and important lecture on the fractures of the clavicle being absent Bichat offered to supply his place. He was blessed with a retentive memory, and his extempore abstract from the purity of his style, the precision, the clearness of his ideas, the exactness of his conclusions, seemed like the teacher rather than the pupil. He was listened to with much attention and retired applauded and admired Intelligence of this talented display reached the ears of Desault, and he immediately offered to receive Bichat into his house to direct his studies and to treat him as a son. The foundation for his future career was laid Desault gave him every possible opportunity and Bichat devoted himself with the greatest ardor to acquire information. By incessant application he accumulated an extraordinary fund of information, which was important, as it enabled him to hold up against the almost sudden death of Desault in 1795. We have not the space to more than glance at the great and original work done by this founder of the modern system of pathological anatomy.

Prior to the time of Bichat the membranes had not formed any special subject of investigation. From the days of Haller to the time of Bichat the whole of the membranes were referred to a common origin and described in connection with the different organs. Bichat was the first author to consider them in relation to their structure, etc., and class them as mucous, serous and fibrous, with various subdivisions. These views he gave to the world in his "Traitè des Membranes," in 1800. As a physiologist he, in 1799, published his "Recherches sur la Vie et la Mort," in which he claimed that there was an organic life and an animal life having their seats respectively in the ganglia and the brain. These two works rendered an entirely new system of anatomy necessary, and this extraordinary work was affected in his "Anatomie Generale," in which Bichat arranged the various organs of the body as comprised in twenty one different tissues, thus laying the foundation of our modern system of normal and pathological histology. This great undertaking is said to have been composed in the course of one year (printed chapter by chapter as it was written), a circumstance almost incredible when we consider the other labors of Bichat in teaching, dissecting, etc.

A system of descriptive anatomy followed, the first two volumes of which were finished by Bichat, and the remaining three being left imperfect, were completed by Brisson and Roux. Besides these he edited an edition of the works of Desault and was, at the time of his death, engaged in preparing a work on pathological anatomy, which has since been published from the author's manuscript. Besides these he was physician to the Hotel Dieu, and daily lectured to large classes of students and made numerous original investigations. He is said to have made upwards of six hundred "post-mortems" during one winter.

Death, whose nature he had so well described, claimed him in the midst of his active studies at the youthful age of thirty-one. He sustained the injuries which caused it in falling down the stairs of his pathological laboratory in the Hotel Dieu, and passed away fourteen days after on the 22d day of July, 1802.

"That any one should have accomplished so much, and of such a nature, so original, so vast, so practical, and it may be added, so perfect, in such a short period of existence, is only to be attributed to the possession of genius accompanied by the most patient and indefatigable industry."

His portrait forms one of the trio of heads so artistically grouped in the seal of the Brooklyn Pathological Society.

J. H. H.

THE

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

SOME REFLECTIONS UPON FIBRO-MYOMA OF THE UTERUS AS INFLUENCED BY INTERCURRENT PREGNANCY.

BY LEWIS S. PILCHER, M.D.,

Surgeon to the Methodist Episcopal Hospital.

Read before the Brooklyn Surgical Society March 3, 1892.

No one disputes that the prognosis of uterine fibro-myomata, as far as regards direct danger to life, is, in general, favorable. It is probable that only a small proportion of such growths determine symptoms of sufficient gravity to bring them to the attention of the surgeon. Of these that do the most atrophy and cease to become sources of suffering after the menopause. In rare instances of the submucous variety spontaneous expulsion into the uterine cavity or gradual breaking down by sloughing has occurred, with escape through the vagina. In other instances, however, the growth is so rapid, or so uninterrupted even by the menopause, as to entail serious risks to life from the compressior of other organs, from its interference with the normal processes of life, from the pains and disabilities it entails, or from the profound anæmia caused by persistent and profuse hæmorrhages. When comparatively young women become the subjects of troublesome fibro-myomata the case assumes a serious aspect, for many years of invalidism and of exposure to intercurrent complications are before them before the favorable influence of the menopause can be expected. The occurrence of cystic degenerations destroys the hope of later disappearance by involution; the occurrence of septic infection with suppuration and gangrenous processes immediately threatens life.

Growths springing from the cervical portion and extending between the layers of the broad ligament occasion early and severe symptoms from pressure upon adjacent pelvic viscera. Submucous growths have their special dangers from the hæmorrhages which they induce. Sarcomatous degeneration of fibro-myomata have been reported in a number of instances.

It must be acknowledged, therefore, that the prognosis of a growing fibro-myoma is always a serious one. Such a growth possesses possibilities of death either through the exhaustion consequent upon a complexus of sufferings; through renal, cardiac or digestive disturbances; through the prolonged anæmia and consequent general nutritive failure and lessened resisting power to withstand intercurrent maladies; through thromboses originating in the sluggish current of dilated blood-spaces in vascular growths; or, finally, through septic or malignant changes in the tumor itself. Further than this, in a large proportion of cases in which life is not directly threatened, the presence of these growths very greatly restricts the usefulness of the patient, prevents her from gaining her livelihood, and entails upon her a prolonged condition of invalidism.

The propriety of submitting to operation cases of the class now described—that is growths which, by their size, their location or the hæmorrhage they provoke, cause life to be a burden to their possessors, and in which no manifest improvement has resulted from palliative and medicinal methods—has ceased to be a debatable question. The hopes that were awakened that hysterectomy for fibro-myomata would be very rarely, if ever, necessary by the promises that the advocates of electrolysis made have very greatly dwindled, and a growing judgment is being formed from the extensive tests of many observers that in only a small proportion of cases will favorable results be obtained by the use of this agency, and that it entails so many risks of its own of provoking septic and gangrenous complications, of causing peritoneal irritation and consequent adhesions, and of postponing operative interference that ought not to be delayed, only to be resorted to ultimately under much more unfavorable conditions for success than would have been the case earlier, that it seems probable that electrolysis will finally be considered as an appropriate method of treatment only for small and recent submucous or interstitial growths.

It is natural on the one hand that gentlemen devoid of special experience or skill in operative work should persist in methods in which they are skilled, especially if a fair proportion of good results have been secured by them with these methods. On the other hand it is equally to be expected that gentlemen who, by reason of their special opportunities or aptitudes, have succeeded in making their operative attacks to be attended with but small risks to life should much more readily resort to radical operative measures than the first class. Both are right to a degree. All cases cannot be treated by one man, nor by one method, if the best results are to be gained, and the individual should be judged by his own standard and not by another's in his efforts to apply to the cases entrusted to him those methods which he has reason to believe he can use best for that particular case.

The occurrence of pregnancy in a myomatous uterus, if carried to term and happily terminated, has often been attended with a favorable effect upon the myoma which has shared in the process of involution general to the uterus, and thus has undergone spontaneous cure. Yet in other instances the location of the tumor has been such as to choke the pelvic outlet, and to add a most serious obstacle to delivery. During the period of pregnancy, however, the myomata that may be present share in the general nutritive impetus that affects the uterus. Interstitial tumors, especially, enlarge rapidly, and may occasion marked aggravation of preexisting sufferings, or introduce new and extreme pressure effects. Such tumors have not infrequently come to operation on account of their rapid growth, or the increase of the sufferings caused by them, without the fact of pregnancy being known.

Martin, in his book on "Diseases of Women," reports four instances of the sort in which his operation of myomectomy was done. Pozzi, in his work on "Gynæcology," tabulates from various sources ten cases of myomectomy, and seventeen cases of supravaginal amputation of the uterus for fibro-myoma, in which the uterus was found to contain a fœtus.

DISCUSSION.

Dr. PILCHER:—I have myself another case to add to this list, and it is as an introduction to this case that the preceding reflections have been called forth.

In May or in June, 1891, a woman applied for treatment at the Methodist Hospital who was forty-one years of age, presenting a large, irregular nodulated tumor spread out through the lower abdominal cavity and reaching as high as the level of the umbilicus. The growth had increased rapidly and had produced such an aggravation of her sufferings that she came for the express purpose of having it removed. Her menstrual flow had been suspended for five months. Yet the appearance of the uterus was not such as would have suggested the presence of a pregnancy.

The multiple nodes felt underneath the abdominal wall were developed to an unusual degree. There was, however, one horn of this many-horned mass upon the left side more particularly, which seemed to be larger than the rest, which had a distinct fluctuation, which gave all of the rational and all of the ordinary signs of a cystic mass, and a supposition that a cystic degeneration of this rapidly-growing multiple myoma was the inference that those who saw it drew. Her condition, however, was such as caused me to attend at once to the performance of a hysterectomy, which was accordingly done after a proper time for preparation. After the exposure of the tumor it was found that it had spread itself out widely into the broad ligaments on both sides extending to the lower portion of the uterus. It was enucleated from either side out of its bed in the broad ligament, was separated in front, and finally a pedicle was prepared which was caught in the clamp, the wire clamp of Tait being used in this particular instance, and then the whole mass was cut away. The arrest of the hæmorrhage, the tying of the vessels and all that sort of thing, demanded considerable attention, and after the cutting away there continued an oozing which required special treatment for its control. A tampon of iodoform-gauze was pressed down into the cavity to hold it in place and also to assist it in draining away the fluids from the part and a glass drain was applied. A second glass drain was also carried down into the cul-de-sac of Douglas, while the pedicle was secured in the abdominal wound and the ordinary absorbent dressings were applied over all. Several hæmostatic forceps were left applied, being brought out through the lower angle of the wound. At the end of forty-eight hours the forceps that were left in place were detached and removed; the tampon of iodoform-gauze was likewise removed; the special glass drain was also removed at the same time, but the main drainage-tube, going down into the cul-de-sac of Douglas, was left in place twelve days in consequence of the continued secretion before it seemed best to remove it. It was finally removed on the twelfth day. Aside from the care necessary to properly dress and look after the drainage of the parts, the further history of the case was entirely without accident; no complications arose. The pedicle, that portion of it which was in the clamp, in due time sloughed, the parts about greatly contracted and cicatrized, and at the end of six weeks she was allowed to sit up and at the end of nine weeks returned perfectly well to her home.

After the removal of the tumor from its bed, upon incising the supposed cyst, it was found to contain a macerated fœtus of about five months' development. Evidently it had been dead some weeks.

I have only this to add to the presentation of the case, that further reflection upon it causes me to think that the best that could have been done in this case was what was done; that the treatment for such a case, a tumor of that kind, enclosing a macerated fœtus, was supra-vaginal hysterectomy. Although the fact of the suspension of the menses was of itself somewhat suspicious and might lead to the thought of a possible impregnation, yet the other symptoms which surrounded the case were such as did not lend any very great corroboration to any such suspicion.

I think the case in all its aspects, in its history, in the peculiar relations of the fœtus to the rest of the uterus, to the successful manipulations which secured its happy removal, and the further freedom from all complication in the convalescence of the patient, all combine to make it one noteworthy.

Dr. Wackerhagen:—I should like to ask Dr. Pilcher if, in performing hysterectomy by laparotomy, he has had experience in cutting through the vaginal attachments instead of making a stump or using a clamp, and for drainage to introduce iodoform-gauze through the vagina in place of the drainage-tube.

Dr. Pilcher:—I have had no experience in that kind of operating myself, but I have given considerable reflection to that mode of operating, and I know that quite recently our friend Dr. Krug, of the German Hospital in New York, has reported an experience in that line, in which he very earnestly commends the adoption of that mode of operation in suitable cases. It is an ideal method of operating, of course. The objection to it, however, is this: that in many cases by the time one has reached the point where the pelvis is cleared up and the remaining stump is ready for further attention, one feels that the quicker he gets that abdomen closed up and the woman back in bed the better it is, the more likely he will be to save the life of the individual, so that it will be likely to be, I imagine, a method to be adopted by gentlemen who have become quite proficient in operating in these cases, and by experience are able to perform the various steps of the operation with much rapidity, and are able to save the vital powers of their patients so they are able to go on and finish in the way the doctor has suggested. It then must be the method for the skilled and experienced operator, rather than for the ordinary surgeon to pursue.

That is the way it has struck me from reflection on the subject and from the slight experience I have had in that sort of work myself. I am inclined to think for the ordinary surgeon, if it is possible to bring the stump into the abdominal wound and secure it there, it is likely to be much better for the saving of the life of the patient. It has its own dangers, to be sure, but those dangers we can guard against and they are guarded against in very great measure by attention to the ordinary rules of antisepsis. When we get so that we can safely do what Dr. Wackerhagen has suggested we will have become finished pelvic surgeons.

REPORT OF EIGHTY OPERATIONS, PERFORMED BEFORE THE MEDICAL CLASS OF THE LONG ISLAND COLLEGE HOSPITAL DURING THE REGULAR SESSION OF 1891-2.

BY J. S. WIGHT, M.D.,

Professor of Operative and Clinical Surgery at the Long Island College Hospital, Brooklyn, N. Y.

The first five cases were operated upon during the last week of September, 1891.

Case I.—A patient, about twenty months of age, was brought to the hospital for retention of urine. An examination disclosed phimosis with a very small opening in the prepuce. After etherization an incision was made in the dorsum of the prepuce, which had to be dissected from the glans penis. Then the operation of oval amputation of the prepuce was completed. The bladder was found empty. It seemed that there had been complete suppression of urine. The kidneys resumed their function the next day, and the patient made a speedy recovery.

Case II.—A male patient, about fifty years of age, had a very extensive fistula in ano, in fact, there were several sinuses going up outside of the rectum and under the planes of the gluteal fascia. The wall of the lower end of the rectum was cut through for nearly three inches upward. The hæmorrhage was very profuse, but was arrested by tampon. The patient had a subsequent operation.

Case III.—A laborer had suffered from a compound comminuted fracture of a finger, followed by necrosis, and requiring amputation. A dorsal incision was made, and then an oval one, when the flaps were dissected up; then the finger was flexed to a right angle with the metacarpal bone, facilitating the disarticulation. A compress was applied between the flaps, thus arresting the hæmorrhage. The wound granulated and the case did well.

Case IV.—A female, about thirty years of age, had suffered from morbus coxæ for a number of years. There were some fistulous openings about the left hip. After etherization these openings were thoroughly incised and the unhealthy wall of limiting fibrine was scraped out with a bone scoop. The surfaces were dressed antiseptically and good drainage was maintained. A tonic and supporting treatment produced a good result. The joint was not involved.

Case V.—A laborer, about forty years of age, had occasionally suffered from constipation, was taken on Sunday night with obstruction of the bowels, which continued until the following Friday, when I saw him and advised his removal to the hospital for the purpose of an operation. He was in much distress, and an operation, though of doubtful utility, was the only thing that promised any help. The cause of the obstruction was not determined. As soon as he was taken to the hospital in the ambulance I performed laparotomy. Many feet of the small intestine had a very dark appearance, caused by severe strangulation. I soon found what appeared to be a band of adhesion fastening down and obstructing the ileum. Ligation and severance of this showed that it was the end of a diverticulum of the ileum, which was about three inches in length. The apex of the pouch pointed downward, the base of origin being above. The *neck* of intestine below the origin of the pouch was quite small, being an obstruction under any circumstances. I amputated the diverticulum at its base and closed it with ligature and sutures. After the removal of the strangulation the intestine did not recover its normal appearance. As the patient was suffering from exhaustion and shock appearing to be failing in strength, I made all haste to close the abdomen, and got him in bed as soon as I could. The best opinion I could form was that he would have died in a few hours without an operation, and with the operation he lived until the next day, not having completely rallied from the shock caused by the strangulation, which was increased by the operation. I have no reasonable doubt as to the opinion that this patient would have been saved by an early operation.

Case VI.—A groceryman, about thirty-nine years of age, had a severe injury of his left shoulder, and in a few months had developed an osteo-sarcoma of the upper end of the left humerus. It was very painful and grew rapidly, being accompanied by much depression and considerable loss of weight. The left hand and forearm were completely useless. The patient was failing fast, and, from all appearance, could not live long. He was anxious for an operation for the removal of the entire new growth. The following were the steps of the operation, which was performed October 1, 1891: 1. The ligation of the subclavian in the third part of its course, and at the same time the ligation of the transversalis colli artery. 2. The exposure and amputation of the left clavicle at the juncture of the inner and middle thirds. 3. An incision extending to the spine of the scapula, and thence downward to its inferior angle was made. 4. Then the posterior border of the scapula was detached, and this bone was cut from the serratus magnus and the subscapularis muscles. 5. Next, the soft parts were severed with the knife, under and across the arm-pit, completely separating the upper limb, the scapula and the outer two-thirds of the clavicle from the body. 6. As a precautionary measure three or four ligatures were applied, and the wound was cleaned off by means of a pair of scissors. 7. The flaps were large enough to cover the entire surface of the wound, and were brought together and stitched in place; a drainage-tube was carried through under the flaps from the anterior to the posterior edge of the opening. This patient made an excellent recovery and has since returned to his business. He regained all the weight he lost. It may be remarked that the operation took one hour and thirteen minutes from the beginning of the administration of ether until the completion of the dressing.

(The cases from the sixth to the fourteenth were operated upon from October 6 to October 15, 1891.)

Case VII.—A female, about thirty years of age, had suffered from disease of the left hip for a number of years. A painful swelling appeared over the great trochanter. The use of an exploring needle proved the existence of a pus cavity. A free incision, followed by scraping out the wall of limiting fibrine, as well as by disinfection, enabled the patient to make a good recovery.

Case VIII.—A laborer had inflammation of the cells of the mastoid process, followed by suppuration. The soft parts were freely incised. Linear osteotomy was then performed, evacuating the pus. The patient recovered under antiseptic treatment and the use of tonics and nutrients.

Case IX.—A laborer, about fifty years of age, on October 6, 1891, walked into the hospital, having an extensive compound comminuted fracture of the skull in the right temporal region. He told his friends who came with him to wait outside for him, as he would be out in a few minutes all right. He did not seem to suffer much from concussion or shock. After etherization and exploration of the wound it was found that the pericranium had been separated from the fragments. Some small pieces were removed and then the depressed portions of the skull were elevated, when it was found that the main fragments were detached from the dura. In all about two inches square had to be removed, leaving a large opening through which brain substance oozed, the dura being much lacerated. It was evident that the wound had become infected to such an extent as to prevent its being made aseptic. This patient died in a few days from septic meningitis, complicated by the effects of a serious injury.

Case X.—A laborer, about forty years of age, had his right leg crushed by the wheel of a beer wagon. Both bones were comminuted and the fracture was compound. The accident occurred in June, 1891. An attempt to save the limb had failed. In October the patient was failing, on account of an osteo-myelitis, accompanied by elevation of temperature. On consultation it was decided to amputate at the knee-joint or above. The following were the steps of the operation: An incision from the head of the fibula directly downward three inches; an incision from the base of the tibia on the opposite side of the leg, also directly downward; a transverse incision in front, making the flap over two-and-one-half inches in length; dissecting up the flap and cutting through the ligaments of the knee-joint; cutting the posterior flap over three inches in length by means of an amputating knife; ligation of the blood-vessels, and excision of the end of the nerve; approximating the edges of the flaps by beginning in the middle of their edges. The knee-joint was filled with fluid blood, which, doubtless, was extravasated at the time of the injury. There was some erosion of the cartilage on the lower end of the femur. The drainage-tube was removed in a few days. The patient improved rapidly, yet the recovery was delayed by the formation of sinuses. Finally, under ether, the sinuses were thoroughly laid open, and in a short time the patient left the hospital as well as ever.

Case XI.—A laborer, about fifty years of age, had an oblique inguinal hernia of the right side, which came down from time to time, and which he was in the habit of reducing. On examination, it was decided to operate. After anæsthesia, every preparation having been made for herniotomy, taxis was made in the following way: The hernial tumor was grasped by the right hand, making compression and some traction; the finger and thumb of the left hand supported the soft parts around the neck of the sac to keep them from spreading out over the ring; part of the contents was felt going back into the abdominal cavity; then the neck of the sac was liberated, so as to permit its entire contents to be reduced. This method of reduction has in my practice, succeeded when others have failed. And I would recommend it.

Case XII.—A patient, nearly sixty years of age, had been treated by me the previous year for severe compound fracture of the leg. After many months the patient could walk; but there was more or less necrosis of the broken ends of the fragments. Under an anæsthetic, the necrosed and necrotic bone was thoroughly chiseled out. The prospect of saving the limb was not very good. The patient was told that an amputation might be necessary. The wound healed kindly in a few weeks; there was no apparent tendency to further necrosis; the patient left the hospital in good spirits.

Case XIII.—A young man had a sebaceous cyst on the right side of his neck. After an incision, the wall of the cyst was found so thin that it was necessary to evacuate it before dissecting it out. The wound cavity was wiped out with a piece of sponge saturated with a mixture of equal parts of carbolic acid and glycerine. The repair was by granulation.

Case XIV.—Captain W., a seaman, over fifty years of age, in the month of June, 1891, had a cartridge of dynamite explode under the heel of his right boot. The sole of the boot was bent upward, but not torn at any point. After its removal, it was found that there had been a compound comminuted fracture of the os calçis, involving the astragalus. There was a large wound in the bottom of the heel, into which the finger could be inserted. It was thought best to make an attempt to save the foot. He was treated on a thorough antiseptic plan from the time of the injury until the fifteenth of October, when I amputated the leg about the middle. The posterior flap was transfixed and the anterior flap was made from without inward. The marrow of the tibia bled profusely. I was obliged to use a large number of suture-ligatures, putting them in by means of curved needles. The tissues of the stump, as it turned out, were already infected. After eight or ten weeks of careful treatment a good result was reached.

Case XV.—A sixteen-year-old boy, one year before, had a very crooked leg straightened by me, with an extensive osteotomy, which will be described in another place. The pieces of the tibia were wired together with a heavy wire, such as is employed in suturing the fragments of a broken patella. Union had taken place, but there was a tendency to necrosis. I made an exploration, and found the wire suture the cause of the necrosis. I removed the wire which was as bright and perfect as when first used. The necrotic bone was scraped out. Recovery soon took place, and the patient was in time ready for an operation on the other leg. This operation was performed some weeks after.

Case XVI.—Operation performed October 16th. A sailor, forty-five years of age, had a fistula in ano. A grooved director passed through the fistula into the rectum enabled me to push the point of the blade of an angular scissors along the groove and thus cut the soft parts so as to expose the cavity of the original abscess. The grooved director was pushed into every pocket, of which there were several, and then each one was thoroughly laid open. The old wall of limiting fibrine was scarified and scraped out from the bottom. Thorough disinfection was followed by packing the cavity with iodoform-gauze. The more thorough the operation, the sooner will there be a desirable result. This case followed this practical rule.

Case XVII.—A native of Wales, thirty-eight years of age, had an incised wound of the throat, made transversely just above the hyoid bone, so that one finger in the mouth and one in the wound would meet. The patient was somewhat under the effects of stimulants, and so was partly insensible. With a small curved needle I sutured the mucous membrane as thoroughly and completely as possible, and then with a large curved needle I closed the entire wound, the sutures going well down to the deep sutures. An aseptic dressing completed the operation. The administration of an opiate was followed by a long sleep. There was primary union of the entire wound, and the patient had a rapid recovery. Operation performed October 15th.

Case XVIII.—A man, twenty-two years of age, fell from the front platform of a street car, and the car-wheel ran over his right foot, in the region of the heads of the metatarsal bones. I told the man I would save all I could of his foot and leg; it was with the understanding that I should use my best judgment as to what ought to be removed when I got him under ether. In a few hours, when I was prepared to operate, I found the foot becoming gangrenous. After the application of the tourniquet, I incised the foot, and at once saw that the amputation must be through the leg. I amputated in the upper part of the lower third of the leg by means of circular flap. A point of special interest was this: The skin of the stump was raised by "traumatic blisters" quite extensively, showing the severity of the injury, and demonstrating the fact that the amputation of the foot was proper; the blisters appeared to threaten the integrity of the flaps. Yet in four or five weeks the patient was discharged from the hospital in good condition. Operation performed October 19th.

Case XIX.—A. B., sixteen years of age, had an unsightly scar on front of his neck, the result of a tubercular abscess. After the etherization, the entire scar was dissected out, and the sides of the wound from the bottom were brought together with aseptic silk sutures. Primary union took place, and the result seemed to be very excellent. At the end of a week the patient was discharged. In about four weeks he returned with the wound of operation open and suppurating. It did not appear to be wise to operate again, and so the treatment was directed to healing the ulcerating surface, which was brought about in five or six weeks. Operation performed October 20th.

Case XX.—A gentleman, forty years of age, was shot in the right side of the head at the middle of the bone of the anterior fossa of the skull. He was suffering severely from concussion of the brain and from shock. His injury was inflicted October 21st by himself in a state of temporary derangement. He was put under the influence of ether; an incision was made down to the ball, which was flattened out by the resisting bone. The skull was indented where the ball struck, and there were lines of fracture radiating in various directions. The impact of the ball had been over the line where the base of the skull meets the side of the skull, thus preventing penetration. I did not think it advisable to trephine, and dressed the wound without closing it. The patient was removed from the hospital by his friends. He made an excellent recovery.

Case XXI.—R. A., six years of age, had tuberculosis of right knee, following morbus coxæ of the left side. I exsected the upper end of the left femur the year before. On October 21st I exsected the knee which was extensively involved. In addition to the removal of more bone than usual, some sinuses in the soft parts were scraped out. It was very desirable to save the right limb, on account of the disability following the previous operation. The case did not do very well, and for some weeks an amputation of the thigh was under consideration. Four months after the operation, the general health as well as the local condition, was much improved. The medicines given were carbonate of lime in five-grain doses and the syrup of iodide of iron in doses of five to ten drops.

Case XXII.—J. M., æt. forty, had suffered for a number of months from an abscess of the face; it had been opened several times; it continued like a sinus; it was opened by a free incision; and the indolent wall of limiting fibrine was thoroughly scraped out with a bone-curette; with the aid of tonics accompanied with antiseptic dressings, the recovery was rapid.

Case XXIII.—O. H., æt. fifty-five, had an extensive infective inflammation of the right hand, beginning in a slight injury. When he came under my observation his hand was very much swollen and very painful. Free incisions gave some relief. The bones of the middle finger became necrosed, and the finger was amputated, the wound being left open so as to facilitate drainage. Subsequently incisions were required in the hand from time to time. Recovery was very slow; six months after the operation he could not use his hand to any great extent.

Case XXIV.—October 28th, a girl, æt. six months, with hare-lip and projecting intermaxillary bone, was operated on. The soft parts were cut from the bone on either side; the intermaxillary bone was pushed backward by means of forcible pressure of the thumbs; the edges of the fissure of the lip were cut off from above downward, except at the border of the lip; they were held by my artery forceps until the cut edges of the lip were brought together with sutures; they were then trimmed off, so as to make a moderate projection downward, when they were finally adjusted. This case did well, the parts uniting by primary union. In these cases I do not use an anæsthetic.

Case XXV.—M. G., a boy, æt. seven years, was admitted November 3d, after having stepped upon a pointed piece of wood. A longitudinal incision was made in the bottom of his foot, extending both ways from the punctured wound. The exploration enabled me to remove some small slivers and dirt, and also to make the wound aseptic. He made a rapid recovery.

Case XXVI.—A married woman, æt. thirty-six years, was admitted first week in November, having strangulated femoral hernia of left side. Several attempts at reduction had been made during the day, and had failed. I saw her about midnight and operated, being assisted by Drs. Lewis and Cochran. The hernia was a small enterocele, with a very tight constriction of the neck of the sac. The intestine was much discolored, but the circulation seemed to return slowly, after cutting the constriction. It was deemed best to make reduction. I tied the neck of the sac as high up as possible, and then exsected the entire sac; I closed the wound with deep sutures, and obtained primary union. This patient was discharged from the hospital at the end of ten weeks, having a radical cure.

Case XXVII.—A girl, æt. about twenty years, had an in-growing toe-nail; after anæsthesia, I split the nail with a pair of angular scissors, one blade having a sharp point; then I carefully avulsed each half of the nail in such a manner as to leave no portion of the "root" to grow again.

Case XXVIII.—This case was one of phimosis of a six-year-old boy. In these cases I perform an oval amputation of the prepuce. A longitudinal incision is made from the narrowed orifice along the dorsum of the prepuce through all the soft parts down to the glans and upward to the sulcus. The corners of the flap are cut off obliquely, and the incisions meet on the lower part of the prepuce. For the most part I use one continuous suture and fasten the ends of it together on the dorsum. This suture is a small catgut ligature which is soon absorbed, not requiring removal. It generally controls all hæmorrhage. I prefer this operation to circumcision. I have never known it to be followed by contraction of the scar, so as to require a second operation.

Case XXIX.—A man, æt. fifty years, came before the medical class November 16th, having a sub-coracoid dislocation of the right humerus. As a rule I give an anæsthetic for two reasons: to avoid injury to nerves and blood-vessels of the axilla, such as may follow manipulation of the limb when the muscles are irritated and unrelaxed; to facilitate the reduction which, under an anæsthetic, is readily accomplished in the following manner: Put a small pillow in the axilla and place the stockinged foot upon it, and then pull on the limb downward, outward and backward, and when the head of the bone is reduced carry the forearm and arm across the front of the chest and carefully and firmly fasten them there with a bandage.

Case XXX.—B. F., aged sixty-one, came to the hospital the first week in November with a serious compound and comminuted fracture of both bones of the left leg near the ankle-joint. Several hours had elapsed from the time of the accident till his admission to the hospital. I removed the loose pieces of bone and exsected the broken ends of the fragments, and, after as complete disinfection as possible, put the limb in a trough splint made of wire-cloth. Every effort was made to prevent and arrest sepsis. The soft parts had been much bruised and to a considerable extent devitalized, so that they were in a condition to be seriously invaded by infection.

In two or three weeks the limb became greatly swollen, fever and delirium having supervened. The infection could not be arrested, and the patient was failing day by day. In order to give him a possible chance for his life I advised an amputation of the thigh, and my advice was sustained by my colleagues. Here I may mention that this patient, at the time of the accident, received a fracture of the right forearm and had his right humerus comminuted at the junction of the lower and middle thirds. On December 2d I amputated just above the middle of the thigh, making antero-posterior flaps by transfixion. The soft parts were very much infiltrated. The bleeding points required a number of suture-ligatures. The soft parts separated from the bone for a distance of an inch; this projecting end of the femur was cut off. This patient improved in every way after the operation. He was discharged from the hospital in the first week of April, 1892.

Case XXXI.—December 2, 1891, G. H., aged twenty-eight years, came to my clinic, having a hard swelling in the calf of the left leg. It had come on spontaneously during the previous week. The patient did not give any history of injury. The signs of inflammation, as well as those of a tumor, were absent. I gave the patient ether and then cut down upon the swelling and found it was an hæmatocele, containing about one-half pint of blood which had for the most part coagulated. The cavity was cleaned out and disinfected. The patient made a rapid recovery.

Case XXXII.—A sailor, aged twenty-five years, had superficial necrosis of the right side of the lower jaw. The dead bone was chiseled and scraped away. The general treatment was antisyphilitic and the local was antiseptic. He made a rapid recovery.

Case XXXIII.—S. C. B., aged thirty-five years, had received a pistol-shot wound of the middle joint of the left little finger ten days before, the 2d of December, 1891. He requested an amputation, "as he had tried to save the finger and failed." It was a case for amputation of the finger. He declined to take an anæsthetic. I made an oval amputation and cut off the head of the fifth metacarpal obliquely, so as to give him a better shaped hand. He did not remain in the hospital, saying he was going to Boston that evening. I have not heard of him since.

Case XXXIV.—C. H. R., a laborer, aged forty-five years, had been operated upon sometime previous for extensive fistula in ano. Some diverticula going up under the fascia of the gluteus on the right side required opening. The operation obliterated the last traces of the sinuses. It is not possible to promise a patient a complete cure with one operation. Sometimes a subsequent operation is required. In general, one operation may cure the patient. Yet it is well for the surgeon to remember that a pocket of suppuration may have so small an opening as to escape all reasonable exploration. And it may be that a new sinus may be developed.

Case XXXV.—J. F., a boy, aged thirteen years, had marked talipes equinus on the right side with atrophy of the foot and leg. The foot was slightly turned in. I advised an amputation, but the parents would not consent. On consultation, it was thought best to make an exsection. The head of the astragalus was prominent in front, and I made an incision over it, separating the soft parts. By forcibly pushing the anterior portion of the foot backward and at the same time seizing the astragalus with the lion-jawed forceps, the bone was enucleated and removed. The foot could not be reduced to place. Then I cut the plantar fascia, which permitted some straightening of the foot. Then I cut the tendo Achillis, but even then the foot remained obstinately out of place. And then I chiseled off the upper part of the os calcis until, with much force, I reduced the foot, but it was considerably in front of its normal position, in fact, the leg came down upon the posterior end of the os calcis. It still occurred to me that an amputation would be better than any exsection. The foot was kept in splints for a week and opiates given to prevent pain. The object was to maintain the reduction.

Case XXXVI.—J. M., a laborer, aged forty years, had a large inguinal hernia of right side. It had become strangulated, and appeared to be irreducible. He came to the College Hospital for treatment December 9, 1891. I made an effort to reduce the hernia, but did not succeed, the taxis causing severe pain. I made preparations for herniotomy and gave him ether. Then I tried taxis again. I seized the hernial tumor with my right hand and made gentle traction, compressing the contents of the sac, and at the same time taking hold of the neck of the hernia with the fingers and thumb of my left hand. I felt some of the contents of the intestine go back with a distinct gurgle. Then I followed up the moving structures with my right hand, keeping them from overlapping the external ring with my left hand. In a few moments the entire hernia was reduced. A pad and bandage were applied, and the patient was discharged from the hospital in four or five days.

Case XXXVII.—L. B, an Italian laborer, aged forty-five years, while fifteen miles at sea in a tug, had a serious compound fracture of the left leg near the ankle. He was taken into the cabin and had the wound stuffed with cloths and old handkerchiefs that were dirty and filthy. The tug came to shore the same day, December 9, 1891, and the patient was brought to the College Hospital, where I saw him and amputated his leg four inches below the knee-joint. The most thorough antisepsis was observed during the operation, every care being taken to prevent any new infection, though it was very certain that he had already become infected. The next morning, some ten hours after the operation, he had a severe chill, accompanied by high temperature. The case soon developed into erysipelas of unusual severity, which affected the general surface of the body. The case went along very badly, although the local conditions were not severe. The patient died December 22, 1891. It is certain that this patient was infected by his treatment before coming to the hospital.

Case XXXVIII.—December 14, 1891, J. H., a boy, aged seventeen years, had a pistol-shot wound of right side of back. The ball passed through the ninth rib and entered the lung, causing the patient to expectorate bloody sputa. Under ether the wound was enlarged and explored, the splinters of bone being cut away. . The ball could not be found. The wound was disinfected as far as possible. The patient made a rapid recovery.

Case XXXIX.—December 16, 1891, J. B., aged seventeen years, was operated upon for tubercular testicle of the right side. There was considerable fluid in the tunica vaginalis. The spermatic cord was ligated high up in two portions by transfixion. The testicle had undergone cheesy degeneration, the internal portions having broken down. The disease began in the visceral tunic and extended inward to the deeper parts of the testicle. The entire wound was closed with deep sutures, bringing about primary union in a few days. This method of closing the wound after excision of the testicle I have often employed.

Case XL.—This patient, aged twenty-three years, a Russian, had large and troublesome varicose veins of the left lower limb. The internal saphenous was prominent on the thigh, and the branches were numerous on the leg. I made a subcutaneous ligation with curved needles, armed with catgut, one needle going over the vein and the other under it. A branch of the vein was punctured, and there was some bleeding until the ligature was tightened, when it ceased. The venous branch was under the saphenous vein. The case made a good recovery in about ten days. This patient did not take an anæsthetic.

Case XLI.—W., aged seventeen years, had a large abscess of the thigh on its inner aspect. An exploring needle was used to make sure of the existence of pus. The abscess was freely opened and washed out with a 1 to 1000 solution of bichloride. The recovery was rapid.

Case XLII.—A patient, about sixty years of age, had his right superior maxilla removed a year and a half before for malignant disease, and was admitted to the hospital for a recurrence of the disease in the right side of the inferior maxilla. On January 6, 1892, I ligated the right common carotid at the point of election, for the purpose of diminishing the supply of blood to the affected structures. The ligation was performed in about fifteen minutes, the patient behaving well under ether. On the third day after the operation the patient got up and went about the ward, contrary to his strict orders. He became paralyzed in his left side and had to be put in bed, where he remained for about two weeks. In the meantime the paralysis disappeared; then he got up again, but had no further trouble, everything going on well. In a few weeks more the superintendent of the hospital gave him employment. The operation inhibited the progress of the disease.

Case XLIII.—Mrs. S., aged sixty-nine years, had a very large cancer of the right breast, which had been growing between four and five years. She was very large and corpulent, and not very strong. The cancer seemed to be just ready to break down. There did not seem to be any involvement of the axilla. In any case the object in an operation was only palliative. I performed what I call the rapid operation, which consists in the removal of the breast, without stopping to tie any cut blood-vessels, the bleeding being checked by pressure. After the removal of all apparent traces of cancer I put in deep sutures, which act as ligatures, and then bring the cutaneous edges together with superficial sutures. A few days after the operation this patient had a very severe attack of acute jaundice, which delayed the repair to some extent. This complication subsided under appropriate treatment, and the patient did well. Soon after the operation I began the use of arsenic bromide, giving one-fortieth of a grain after each meal.

Case XLIV.—An immigrant, aged about eighteen years, had an inflammation of the left knee-joint, which did not yield to ordinary treatment. He had tubercular deposits in both lungs. The affection of the knee was a rapidly developing arthritis. Under ether I made a free incision on both sides of the knee, and explored and disinfected the joint. There was necrosis of the posterior wall of the patella as well as necrosis of the lower end of the femur and the upper end of the tibia. I passed a drainage-tube through the knee-joint for the purpose of drainage and daily disinfection. The case did well for five weeks, the patient being quite free from pain.

Then the soft parts about the knee began to proliferate quite rapidly, causing very considerable swelling. The patient grew weaker from day to day. With the hope of prolonging life I amputated his thigh. This was about two months after the first operation. Then the patient improved for a time. This was only temporary. His death occurred from exhaustion, due to tuberculosis of the lungs.

CASE XLV.—W. H., aged forty-three years, January 10, 1892, had his head caught between a heavy barrel and the wheel of a truck, almost completely crushing the skull. On the day of his admission to the College Hospital I removed about six square inches of loose bone from the right temporal region and incised the dura in order to let out a large collection of blood which was partly clotted. Some of the brain oozed out, the substance having been bruised to a diffluent mass. A drainage-tube was inserted into the brain for the purpose of preventing any accumulation inside the dura, and the wound of the scalp was closed in such a way as to permit the free escape of the blood which was slowly oozing. Every possible antiseptic precaution was taken, the scalp having been extensively shaved and disinfected. The patient never fully rallied from the concussion and shock of the injury. He slowly became exhausted and died on January 24, 1892.

CASE XLVI.—J. F., whose left leg had been previously straightened for deformity, was operated upon January 13, 1892, for the purpose of removing an angular deformity of the right leg, which existed near its middle. This operation was similar to the one performed the year before, only it was done in half an hour, while the other required an hour. In the case of this leg the fibula had become, as it were, fused with the tibia, making them quite like one bone. After the exsection of nearly four inches of bone, the two fragments, for such they were, could be quite accurately fitted and wired together. The wire was such as I use in suturing the fragments of a broken patella. In other respects also the treatment was the same as before, with this difference: the wound was closed with deep sutures. The repair of this leg was with more speed than that of the other. This patient was discharged from the hospital May 6, 1892, when he was beginning to walk quite well.

CASE XLVII.—J. Mc., a school-boy, aged fourteen years, had been treated for tubercular glands in the right submaxillary region for two or three months, with some improvement. On June 14, 1892, I removed them, and found the submaxillary gland somewhat enlarged, probably from simple irritation. I did not remove it. After some weeks, this gland was only slightly larger than normal. The right side of the face became somewhat swollen or rather "puffy." The general health became quite as good as ever.

Case XLVIII.—J. H., a laborer, aged seventeen years, had his right femur broken about five years prior to June 20, 1892, when he had necrosis at the seat of the repair, which was just below the middle of the bone. Rest and nursing made much improvement; I gave him ether, cut down, and scraped the necrotic bone, when repair went on more rapidly. I have often seen necrotic and caseous bone improve greatly under rest, nursing and a regular diet.

Case XLIX.—Wm. M., a sailor, thirty-seven years of age, was admitted to the College Hospital January 25, 1892, having a strangulated inguinal hernia of the right side. The hernia was of large size, and had been severely contused by persistent efforts made to reduce it; in fact, he was suffering from shock, and the pain was great. The case was considered serious, and the result of an operation uncertain. After opening the sac, I found a large quantity of omentum, which had been contused so as to contain in its folds considerable blood. The exposed omentum had been twisted into several dependent portions; there was a small quantity of intestine out, and it was readily reduced. The spermatic cord had been dislocated from its normal place, and was entangled in the omentum from the testicles upward to the abdominal cavity. The protruding omentum was quite irreducible; I ligated it in three parts, one of which contained the entangled spermatic cord; another ligature was put on the spermatic cord just above the testicle; then the entire omental mass was cut away, and the stump put just inside the canal. The sac was dissected up close to the peritonæum, and the neck of it was tied with a strong catgut ligature, and the entire structure was cast off. The wound was closed with deep silk sutures, care being taken to include the ligated part of the sac. It would have been impossible to close the canal if the spermatic cord had been left. The already atrophied testicle was left *in situ*. The wound healed by primary union. The result is a radical cure.

Case L—A man, fifty years of age, January 26, 1892, was knocked down upon his face and hands by the falling of some bags of rice, and had the end-bone of his left thumb dislocated inward. Under anæsthesia I made the reduction in the following manner: I bent the end-bone inward so as to meet the next bone at a right angle; pushed the base of the bone outward through the rent in the capsule, and then straightened it out, when it resumed its normal position with a "click."

Case LI.—B. M., laborer, twenty-four years of age, had an ingrowing toe-nail on right great toe, very painful, making him lame and incapacitating him in his business. On January 24th I operated: I separated the soft parts from the root and sides of the nail with a knife; then I pushed the sharp-pointed blade of an angular scissors under the nail down to the root, and split it in two; one jaw of a strong forceps was pushed under the cut edge of each half of the nail, when it was firmly grasped and carefully torn off so as to leave no portion of edge; this must be done, inasmuch as the nail will grow again, if any of the root is left, and that will require another operation. I have performed a large number of operations of this kind and have never had occasion to regret it.

Case LII.—F. McG., twenty-four years of age, while intoxicated was struck on the head and received a compound depressed fracture of the skull; there was no evidence to show how the injury happened. Ether was given; a semilunar incision was made; a button of bone was cut out by the trephine; the depressed bone was elevated. The fracture was nearly over the right lateral sinus. Much care was needed during the operation in order to keep from injuring the lateral sinus. The handle of the lion-forceps was used as an elevator, the end of it being put under the depressed bone, and the part of it just beyond resting on the sound portion of the skull which acted as a fulcrum. A drainage-tube was used in order to prevent any accumulation of blood under the sutured scalp. This patient was admitted January 28, 1892, and was discharged February 22d, the recovery being quite complete.

Case LIII.—C. N., a sailor, aged twenty-six years, fell upon the outer aspect of his left arm and shoulder, and on January 29, 1892, one week after the accident, was admitted to the College Hospital, having a sub-coracoid dislocation of the left humerus, accompanied by paralysis of the musculo-spiral nerve, the wrist-drop being complete. I gave ether so as to cause no additional injury to the nerves, and made the reduction easily by traction and counter-traction. The paralysis was treated by means of electricity for several weeks, without benefit. May 29, 1892, he was acting as orderly in the hospital, where I examined his injured limb. The wrist-drop was still complete, nor could the forearm be extended. The forearm was in a state of pronation. The action of the deltoid appeared to be perfect. Was the musculo-spiral nerve injured by the head of the dislocated humerus? I think not. It was probably injured where it winds around the humerus. It was contused at this point and has not recovered its integrity. Will the paralysis be permanent?

Case LIV.—P. B., a Swedish sailor, aged eighteen years, came to my clinic, saying he had a needle in his right wrist. On careful pressure with the finger, I could feel a small point of resistance over the front of the base of the radius, between the radial artery and the tendon of the carpo-radial flexor. In this instance a longitudinal incision would be best; so I made one about an inch in length, and found the end of a needle-fragment, which, after some difficulty, I got hold of with the forceps and pulled out of the base of the radius The fragment was the eye end of the needle, and was only about one-eighth of an inch in length. I need not explain why a V-shaped incision was not made. I have more than once removed needle-fragments from cancellous bone.

Case LV.—J. H.. a laborer, aged———. came to my clinic, with an anchylosed elbow, following a fracture of the external condyle of the humerus, which had occurred six weeks before. The forearm was abducted and fixed about midway between complete extension and right-angled flexion. The limb was in the same attitude in which it had been treated. I gave the patient ether, and, by means of great force, brought the forearm up beyond the right-angled position binding it there on a splint. The patient complained so much of the pain that the splint was removed, when the forearm resumed nearly the position it was in before the operation. In a few days the patient left the hospital declining to have anything more done.

Case LVI.—A girl, aged six months, had a nævus on the left cheek; it was rapidly enlarging. I ligated by passing, with a curved needle, four ligatures under it, and then tying the ends so as to strangulate the entire mass, which came away in a few days. In this case, the scar became somewhat vascular, and another operation will probably be necessary.

Case LVII.—Ida R., aged two months, had an extensive fissure of palate and maxillary bones, accompanied by hare-lip. The sides of the fissure in the lip were dissected from the hard parts, and the edges were vivified in the usual way. The projecting intermaxillary bone was forcibly pressed backward so as to make the repaired upper lip as even as possible. There was considerable oozing of blood from the cut surfaces, even after they were sutured together. There was primary union and a good result followed.

Case LVIII.—On February 3, 1892, same day as previous case, E. F., a five-months-old girl, with a hare-lip, accompanied by fissure of the upper maxillary, came for operation; the steps of the operation were similar to those in the last case. One peculiarity may be noted: This patient had the habit of sucking her thumb; she continued to suck it after the operation; this did not seem to interfere at all with the process of repair. Primary union took place and a good result followed.

Case LIX.—M. E., a laborer, who had been treated for an oblique fracture of the lower part of the leg until union had taken place, had a sharp point of the upper fragment projecting downward under the fascia and skin in front, with a tendency to work its way through. I made a longitudinal incision down to the sharp projecting end of the fragment, exposed it by careful dissection, and cut it off obliquely with a chisel, so as to make the line of the tibia nearly straight. The result was a kind of compound fracture. I closed the wound entirely with deep sutures and primary union took place. My patient was up in a few days. Judging from cases which I have seen go without such an operation, I should say that my patient was saved several weeks of time. This is an admirable kind of practice, and is further illustrated by the following case:

Case LX.—J. D., a laborer, aged about forty-seven years, had a very oblique fracture of the leg at the junction of the middle and lower thirds, followed by delayed union. On the 10th of February, there was still some motion at the seat of fracture, and the sharp point of the upper fragment was projecting under the skin in front of the leg. I operated in the same way as in the previous case, obtaining primary union of the soft parts. After the operation the bony repair seemed to go on faster, so that the patient soon got up on crutches.

Case LXI.—A sailor, aged thirty-three years, had a pleurisy, followed by empyema. On February 10, 1892, I operated in the following manner: After anæsthesia, I cut into the pleural cavity between the fifth and sixth ribs; then pushed the beak of a lithotomy staff inside, and brought the end of it so that it could be felt between seventh and eighth ribs where another opening was made; a strong silk ligature was tied around the neck of beak, and at the same time fastened to the end of rubber drainage-tube; as the staff was withdrawn, the drainage-tube was pulled after it, until one end came out of the upper opening, while the other end was left projecting from the lower one. I do not think exsection of a rib, an operation which I have sometimes performed, is preferable to this operation. The operation by double puncture gives us better control of the drainage-tube, and is performed in less time than the one in which there is exsection of a rib.

Case LXII.—A ten-year-old boy was playing with a loaded shot-gun, when "it went off" sending the charge into the left knee, making a compound comminuted fracture of the upper end of the tibia and the lower end of the femur, the femur having received the greater injury. The shock was very great, not only from loss of blood, but also from extensive bruising and tearing of the soft parts, as well as from extensive comminution of bone. The shock continued, and it was feared that it might be fatal, since some oozing of blood continued. It seemed to me that the ether might stimulate him, and so it did as soon as he began to feel its influence. I amputated the femur near the middle by transfixion, as rapidly as possible. The ligation of the arteries, the exsection of the end of the sciatic nerve, the introduction of the sutures, and the application of the dressing were very brief. The patient rallied well from the shock of injury and that of operation as well. This patient was admitted to the hospital February 5, 1892, and discharged, recovered, April 1st.

Case LXIII.—A patient, aged fifty-three years, had cancer of the lower lip, and consented to an operation without an anæsthetic. A V-shaped piece was cut out of the lip with a pair of angular scissors, going outside of the infected tissue. The sutures operated as ligatures, making complete approximation of the cut surfaces and arresting the flow of blood. Primary union occurred.

Case LXIV.—A ship's carpenter, aged about thirty-five years, was admitted to the hospital early in February, having a traumatic aneurism of the left radial artery two inches above the wrist-joint. Some months previous to this time a small piece of steel flew from a hammer he was using and made a punctured wound of the artery, the result being a traumatic aneurism of considerable size. The operation consisted in "laying open" the sac and ligating the artery below and above with suture-ligature. The subsequent treatment was that for an open wound. In a short time the cure was complete.

Case LXV.—J. H., aged thirty-seven years, had a large lipoma on the back just below the base of the neck. The capsule of the growth had to be dissected out. In some locations a lipoma can be easily enucleated. By means of deep sutures, closing up the entire wound, I obtained primary union in a few days. This method is much to be preferred to superficial sutures only, or an open dressing, either of which may require some weeks for the process of repair.

Case LXVI.—J. K., forty-eight years of age, fell from the hub of his truck and came down upon his left shoulder. Three weeks subsequently, February 18, 1892, he came to the hospital, where an examination showed that he had sustained a dislocation of the left humerus. The signs of contusion were still present. The arm was considerably abducted; it was quite immovable by volition and could not be used. In my attempt to reduce the bone to place, I was assisted by Drs. Burge, Lewis, Cochran and Rogers. After etherization, I broke up the adhesions by manipulation. The bone would not go into place, though we repeatedly used all the force that appeared judicious and safe under the circumstances. The local injury was severe and the patient suffered much shock and it seemed wise to suspend our work The question of cutting down upon the head of the bone in order to liberate it was postponed. The patient left the hospital on the 20th, declining further aid.

Case XLVII.—F. L., aged seventy-one years, February 16, 1892, was sent to hospital for operation on account of strangulated hernia. The history was of hernia coming down from time to time. Reduction had been made by the family physician and also by the patient himself. He was sent to the hospital because the hernia was irreducible. While the usual signs of strangulated hernia were not present, an operation was thought to be advisable. There was a large tubercular mass involving the structure of the spermatic cord as well as the testicle. On removing it I found that the disease had invaded the various structures of the abdomen, especially the glands. There was no sign of hernia discovered during the operation. In so far as the local conditions were concerned there was marked improvement. But the patient failed slowly, and died on February 29th from exhaustion.

Case LXVIII.—J. McK., aged twenty years, on February 20, 1892, was brought to my clinic for a swelling in the right inguinal region; it was supposed to be an irreducible hernia. Though I could not find the signs of a strangulated hernia, I operated in the same way I would if there were one. I found a cystic hydrocele of the cord implicating the testicle, and the disease appeared to be of tubercular origin. The walls of the sac were very thick and contained a sero-purulent fluid. I removed the diseased structure in the same way one would exsect the testicle, by ligation as high up as possible. There was no evidence of hernia left. I dressed the wound by packing it with aseptic gauze. This patient made an excellent recovery in about three weeks. Here let me remark that I have obtained primary union after exsection of the testicle by means of deep sutures; in a case like this it seemed to be better to leave the wound open so that it could discharge freely.

Case LXIX.—In Case XLIV the knee improved, as well as the general condition, for a little time, then the tissues of the knee began to proliferate and the patient began to lose strength. The only chance to save the life of the patient appeared to be in amputation of the limb. On February 22, 1892, I amputated the thigh in the upper part of the middle third. The stump healed rapidly and the general improvement was very marked, yet in a few weeks, the disease of the lungs went on somewhat rapidly, and death followed from exhaustion.

Case LXX.—This patient had already had an operation, which has been noted under the head of Case LX. Another sharp point of bone became prominent under the skin. An operation similar to the other was performed and the result was excellent.

Case LXXI.—A sailor, about twenty-seven years of age, had a general enlargement of the left shoulder. It was impossible to say what was the exact nature of the pathological change. I introduced the exploring needle at several points ; I did not find pus, nor did the bone appear to be changed in form and structure. The only thing to do was to wait for further developments. In the meantime, the patient was sent home, he being a foreign seaman.

Case LXXII.—E. R., a sailor, aged nineteen years, was admitted to the College Hospital, February 24, 1892, with an extensive compound fracture of the lower end of the right humerus ; the accident occurred two weeks prior to admission. He said the captain of his ship removed a large piece of bone at the time of the accident. On the day of his coming to the hospital I found the end of a piece of bone projecting from the wound. The soft parts were very much swollen and infiltrated with pus ; it was a case of septic wound. I gave the patient ether, enlarged the wound, washed out the cavity, and removed a piece of bone nearly four inches in length and about one-half the thickness of the entire bone. As to what bone was left : The lower end of the upper fragment was pointed and about one-half of the entire bone ; the lower fragment was also pointed at its upper end, but less of the bone had been broken off. The broken ends could not be brought into desirable coaptation ; I put them in the best relation possible, then I put the limb upon a double-angled splint, made of wire-cloth. It was disinfected every day and replaced upon the splint. In about six weeks there was firm union, though the callus was very abundant. There was good motion at the elbow-joint, the forearm flexing and extending not quite completely. The arm was about two inches shorter than the other. It is a matter of interest to state that this patient fell and refractured the humerus twice, and each time there has been good repair and a useful limb has been obtained.

Case LXXIII.—A young man, about twenty years of age, had a pistol-shot wound of left elbow and refused to tell how the accident happened. It appeared as if the elbow-joint had been penetrated. An incision disclosed the fact that the ball had lodged in the bone of the ulna. A few cuts with the chisel enabled me to lift the ball from its bony bed. The joint had not been penetrated. The case made a rapid recovery.

Case LXXIV.—A laborer, aged thirty years, came into the hospital with an inflamed hand. In such a case I use an exploring needle to see if there is pus. The exploring needle demonstrated the existence and the location of pus. An incision was followed by rapid improvement; the usefulness of the hand was restored.

Case LXXV.—Florence E., aged five years, had spondylitis in the dorso-lumbar region, accompanied by curvature of the spine. In this case several attempts to apply a spinal jacket had failed. The process was as follows: One nurse supported the upper part of the body of the patient and another nurse supported the lower part, both being seated in chairs a little distance apart. A light plaster jacket was then put on by Dr. Cochran. The little patient was greatly relieved, the jacket being a decided success.

Case LXXVI.—A woman, about forty years of age, had an angular curvature of the lower part of the dorsal spine of some years' standing. The patient was daily suspended by the armpits, the pully being fastened to a high saw-horse, instead of a tripod. A plaster jacket was applied by Dr. Gardiner. The patient was greatly relieved.

Case LXXVII.—A man, aged forty years, had large and troublesome varicose veins of the right leg. The veins were exposed by incision and ligated with catgut. The wounds were sutured. The repair took place in a few days. Antiseptic principles has made it possible to operate on varicose veins. Invariable success has followed in my cases.

Case LXXVIII.—F. A., aged eighteen years, had a hydrocele of the right side of the scrotum. It had been tapped several times. I opened the sac, evacuated the fluid, washed out the cavity with an aseptic solution, and packed the wound with iodoform-gauze. The serous surface granulated, and in about three weeks the cavity was obliterated, bringing about a radical cure.

Case LXXIX.—M. H., aged forty-three years, had been troubled with hæmorrhoids for several years; at times they bleed profusely; often they were very painful. I performed the operation of ligation; it is safe; it leaves a minimum of scar tissue. Sometimes the patient suffers pain after the operation; this is caused for the most part by neglect to remove the hairs. At any rate, the pain can be controlled by opiates. The patient was well in a few days.

Case LXXX.—A laborer, about twenty-six years of age, had a growth rapidly form on the right leg, involving the tibia, the muscles and the fascia; the time of development had been only a few months. A diagnosis of osteo-sarcoma was made and amputation advised. At the time of the operation I incised the growth and the appearance confirmed the diagnosis. Then I amputated at the knee-joint, according to the method proposed by myself. This operation has been already described in several medical journals. The patient made a speedy recovery. This patient more properly belongs with those I operated upon during the reading term, but I will let it be published here.

BICHROMATE OF POTASSIUM AS AN EXPECTORANT.

BY JOS. H. HUNT M.D.

Read before the Medical Society of the County of Kings, April 19, 1892.

It was during the winter of 1875 that I was in attendance upon a child two years of age, who was ill with bronchitis. Though seventeen years have elapsed I well remember the child as it lay then, breathing at the rate of ninety respirations per minute, pulse too rapid and feeble for me to count it, countenance cyanosed, veins of forehead and neck prominent and turgid, and a cool moisture covering the little sufferer's body. The child was suffocating and seemed to me to be dying. I called for consultation and my friend, Dr. Alexander Hutchins, responded. He produced from his pocket a powder, telling me that it contained one grain of the bichromate of potassium, triturated with nine grains of sugar of milk, directing me to place it in a tumbler with twenty teaspoonfuls of water, and give of the solution a teaspoonful to the child every ten minutes till the symptoms were modified. That was in the evening, and in less than two hours the symptoms of suffocation were so much relieved that I was able to leave the child for the night with directions that the medication should be kept up at one hour intervals. The change in the condition of the child when I visited it the next morning was surprising. The respirations had dropped to less than forty; the child had been able to sleep and take some nourishment; the cough, which before was dry and barking, had become looser, and the lung, which the night before hardly admitted any air, was now filled with loose moist bronchial râles. The aspect of the case was changed from that of a child evidently dying from what we then called capillary bronchitis to a plain case of bronchitis which went on to successful recovery.

This, gentlemen, was my first introduction to a drug which has ever since formed a part of my armamentarium. For sixteen winters I have used bichromate of potassium, a substance which we are more apt to think of on account of its chemical properties; or, if included at all in our materia medica, it is as an escharotic, a rather mild substitute for the more active chromic acid. Medical literature contains far more written upon its poisonous than on its remedial qualities, indeed, except for occasional allusions to its use in diphtheria, in the treatment of which one author says it corresponds in its action in many respects with bromine, we have been able to find but little in English literature, though considerable has been written by the Germans and French. The only article of importance I have been able to find is that of Alfred Drysdale, M.B., of Cannes, France, entitled, "An Attempt to Ascertain the Sphere of Action of Bichromate of Potassium," published in the *Medical Press and Circular*, London, 1886, which I advise those of you who are interested in the subject to read. He reviews about all that has been written on the subject before him, including the experiments of the Austrian Proving Society, which made extensive experiments with bichromate of potassium on animals in 1844, some of the members in their enthusiasm even going so far as to record experiences where they had studied its effect upon their own persons.

The conclusions reached by Dr. Drysdale are that "bichromate of potassium has a specific action or elective affinity for certain organs and tissues," and that "its action is most marked on the mucous membranes of the respiratory passages, nose, eyes and mouth, and on that of the stomach and intestines; on the skin, liver and kidneys, and lastly, the fibrous tissues, periosteum and bone. No specific relation can be traced with the serous membranes, with the genital organs or the cerebro-spinal system. Its sphere of usefulness is, therefore, among disorders of the organs and tissues above enumerated, viz.: mucous membranes of the respiratory passages and alimentary canal, the liver, kidneys, skin and bones."

My experience with the remedy has been confined to catarrhal conditions of the respiratory mucous tract. I have not kept histories of cases, and can, therefore, only generalize and say that for the past fifteen years bichromate of potassium has been my principal agent in treating this class of diseases in infants and young children. In medicinal doses it is practically tasteless, and in my hands more efficacious than the nauseous chloride of ammonium which most of us use in about the class of cases in which I use the bichromate. The experience in my first case has been more than once repeated, though it took a second case almost as bad as the previous one, to which I again called Dr. Hutchins in consultation, with an equally gratifying result, to give me the confidence in its utility which I now have.

I like the old term alterative. I know it has been discarded by modern therapeutists as non-scientific; but while it may be so it expresses a something which we all intuitively understand, and clinging to the old word I would describe the therapeutic action of bichromate of potassium in these cases as an alterative expectorant which a slight increase in the dose makes more stimulating and may become an irritant emetic.

You all know the salt, in its crystalized form of garnet-red prisms of resplendent lustre, which is soluble in twelve parts of water at ordinary temperature and in equal parts of boiling water. It is best administered internally in the form of an aqueous solution, but this is liable to decomposition if kept too long. I have for years kept it in the form of a trituration of one part with nine with sugar of milk, which I dissolve in water at the bedside. Lately some of our tablet makers have been putting up tablets of this triturate, each tablet containing $^1/_{50}$ grain, which is a minimum dose for a child one year old. It is insoluble in alcohol and is rapidly decomposed in glycerine. I find it taken and borne readily by the youngest infant, unless given within a few minutes of feeding with milk, with which it seems to be incompatable, so that when the administration of the medicine is at very short intervals, milk-feeding must be, for the time, suspended. I am accustomed to give it to a child one year old in $^1/_{20}$ grain doses, at first at frequent intervals, when the symptoms of suffocation are distressing or the breathing very rapid; I administer a dose every fifteen or thirty minutes until I see some amelioration of the symptoms, and then diminish in frequency to one hour intervals. If the interval is prolonged more than one hour the effect seems to die away.

Drysdale says that not more than $^1/_4$ grain should be given per day, but I have exceeded that amount without bad effects. I am accustomed to instruct the attendants to diminish the dose if it acts as an emetic, but not to diminish the frequency of its administration. When it is rejected by the stomach it is without nausea or after-irritating effect. Trituration seems to make it less irritating to the stomach. I find that when I write a prescription for one grain of bichromate of potassium to be dissolved in twenty drachms of water the attendants will tell me that it seems to irritate the stomach and is apt to be rejected, whereas, if I give ten grains of the powdered triturate I have described or a corresponding number of the $^1/_{50}$ grain tablets, to be dissolved in twenty spoonfuls of water, spoonful doses are almost never rejected. In many of my families it has become the household remedy. The mother keeps some of the powdered triturate in the house and when the baby has a little coryza or influenza, or, as she expresses it, "catches cold," she prepares some of the solution and administers it instead of the traditional goose-grease and molasses, which some of our early childhood days recall with loathing.

It is a frequent occurrence for me to get letters from former patients residing at distant out-of-town points begging me to send them some of that powder which, when dissolved in water, made that beautiful yellow solution which I used to give the baby.

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ADDRESS BY DR. ALEXANDER HUTCHINS AT THE GRADUATING EXERCISES OF THE BROOKLYN TRAINING SCHOOL FOR NURSES, MAY 17, 1892.

When from the folds of the bridal gown are jostled the grains of rice on the tapestried floor of the Chicago Limited, the smile of recognition is not so much over the blushing consciousness that the secret has been revealed as of tender sympathy with the new life that has just begun. The flowers that crowd the cabin are redolent with the unfolding of new anticipations and new experiences. The child that comes attracts to itself the affectionate wondering as to what its place will be. The king is forgotten as the young prince steps into the plaudits and god-speeds of his future subjects. As the boy crosses the line of his majority all the care of the past is, for the moment, lost in the glad hope that the man will be responsive to the parent's prayer. No more sympathetic audiences gather than those that meet, these early summer days, when in soft robes and through the lavishment of flowers the young men and maidens pass over the commencement stage from dependence on others to reliance on self. The starting of bride and voyager and child, of prince, of man's estate and educated youth commands attention as does no other event on life's journey. For the young it is the beginning, for the disciplined and Christian worker it is the mecca whither the spirit of nurture, of helpfulness, of service has tended through sacrifice and endurance, through weariness and hope to reward and rest, to reburnish the armor and take courage for the work yet to be done.

As part of this fellowship of service, the several interests that cluster around this school have come to-night within the fane of this great nourishing charity, to exchange mutual felicitations over the success of this work, to rejoice over the excellent results their labors have thus far achieved, and to gain inspiration and wisdom for enlarging its usefulness. In circumstances unlike any in the past and of unusual promise have we come. Now that the time has gone by it is difficult to recall what a chasm has been bridged, within the past twelve years, in hospital control and in the prudence of the sick-room by the introduction of training schools for nurses, so integral a part do they now seem of the riper civilization and yet so long delayed. Connection with a general hospital is essential to the useful instruction, to familiarity with technique and appliance and to growth of confidence in the presence of the many-sided phases of disease. Yet this school has been favored beyond all others in the privacy of its home life, by its occupation of a separate building, contributing to the comfort of all whose tutelage has been conducted under its protection. Fortunately the founders and managers have been so related to the cultivated and public spirit of the city, and they, themselves, so inspired by wise foresight of the needs of the school, no less than of the constituency to which it was to minister, that its interests have not faltered from its inception, and as their reward and assurance, these graduating exercises are held for the first time and with great fitness, within these walls.

Having proved the need of the school by its success, and having proved that it was in the line of progress and capable of much wider extension, with possibilities of enlargement that might open at any moment, and it appearing that certain relations of the school and hospital were so intimate that they should be under common control, within the year past the trustees of the hospital accepted the financial government of the school and to-night, for the first time, they are sharers in the assurance and reward.

The training schools are so late an innovation on old methods, have enlarged their functions so rapidly and in so many directions, and in springing so suddenly to the front, have had to meet so quickly and to solve instantly so many new problems, that the office of superintendent has not been an easy one to fill. Expertness in her profession, capable of conveying instruction, skilled in guarding mildly but surely the social order of the home life, wise in arranging the detail of duties so that the hospital *régime* shall suffer neither delay nor neglect, prudent, yet free in all that pertains to the health and comfort of her family, with the dignity of character and ease of manner that discipline is forgotten in the presence of example are a combination of qualities and accomplishments which might fittingly be an easy product only of institutions ivy-grown and venerable in historic precedent. Yet trustees and managers, the hospital staff and internes of the school will bear concurrent testimony to the high degree in which these qualifications have been manifest in the superintendent who now in this first-night commencement in the home, has her assurance and reward.

All interested in the great charity of the Brooklyn Hospital unite with the city at large, on this festal night, in mutual satisfaction over the increased facilities that are immediately to take shape in the erection of a new wing on this superb foundation. Three pressing demands are to be met, and with unstinted liberality, in the most advanced methods of modern hospital construction. The orthopædic department founded by our beloved friend, the late Dr. Hutchison, has grown to proportions of usefulness for which ample space and appliance will be provided. The maternity department, heretofore sharing accommodations in the general ward, will be isolated and separate on an entire floor, giving an increasingly large clientage, and the rest and care and treatment their special needs demand. A third class of patients, steadily increasing in numbers, strangers in the city or lodged in hotels or boarding-houses, and who are glad to pay for care and comfort, is to be amply provided for in cheerful and comfortable privacy.

For salubrity and loveliness of situation the Brooklyn Hospital has no peer among similar institutions; for liberality of management in the freedom of its open doors, the spirit of service finds here a noble example. There are but two questions asked. "Is help needed? Is there a vacant bed?"

In my judgment the managers and trustees did wisely in consolidating the interests of the school and hospital on the one foundation, and both interests have a right to be gratified with the results thus far attained. It is better to combine the interests, unify the responsibility and simplify the budget. But I am free to say that the one in offering and the other in accepting the trust are together facing a responsibility, the far-reaching consequences of which it is difficult to determine.

The South Carolina doctors objected strenuously to the introduction of trained nurses into that state, the instinct of self-preservation being strongly on the ground that they were an unnecessary interference with their duties, possibly of their income. This opposition has been overcome. There were some who thought in the early days of this school that its possibilities were within rather limited lines, that the time could not be very far when the income of the graduates would not be maintained to the degree the early graduates secured. Not only has that forecast proved inaccurate, but that first inaccuracy has veered the consensus of opinion squarely around to recognize the undeniable fact that the introduction of the trained nurse has already called a halt in the increment of the nurses formerly depended on in private families, and that it cannot be many years before there will be none to be had. Formerly, every physician kept a list of nurses whom he personally knew. Now he sends to the directory or to any one of several head-quarters where nurses are housed. It has happened several times within a year or two in this city that the supply of nurses was not equal to the demand. The number of trained nurses was insufficient and there were no others competent. The trained nurse met a sentiment and has cultivated a sentiment to the extent that there is no chance for nursing as a business now that nursing has come to be a profession. What has proved true in these great cities with all their resources, has become disastrously manifest in places more or less remote from the cities, and, as a rule, the more remote, the more manifest the change. With the present limitations of the training schools, it is not difficult to foresee how imminent and very serious the crisis. At the present rate of supply of the trained nurse and the passing away of the former source of supply, it cannot be long before there will be a state of things, with the highest bidder for skill on one side, and, on the other, the needful acceptance of uninstructed good heartedness to meet the emergency. There are already serious signs of strain that ought not to be disregarded and especially, as the causes thereof are directly traceable back to our own doors. We have made the trained nurse and she is an expensive, not luxury, but necessity. It is the very few that are rich, and sickness in a home is a very serious financial matter. Have you any idea of the great sacrifices so often made, and made not grudgingly, to secure proper care of the sick? If not, I cannot stop to tell you. The statement is, however, very forcibly true. But the urgent thought is, do you shrink from the responsibility you have incurred? Are you prepared to follow up by hard work and more liberal giving than you dreamed of twelve years ago, a work that attracted your fancy then, but which has developed into an issue affecting the very heart-throbs of our civilization? If ever the problem was to provide dignified and lucrative occupation for women, the problem has sprung mountain-high beyond that, to how to modify the present agencies of instruction to meet the urgent demand of the times. This work has gone too far to stop. The responsibility is on the managers and trustees and it is yet to be faced. This school and this hospital are to be but types of what must prevail in all similar institutions. The number of internes is to be very largely increased, the accommodations for their housing and provision for their care are to be greatly enlarged. The hospital wards, instead of being officered by just enough to attend to the duties, are to be for a much larger number schools of instruction and observation. You cannot escape the logic of events. I do not venture on the solution. The material will knock at the doors and public sentiment will somehow provide the means that will make it possible for you to open the doors.

At the outset, as fitting the occasion, I invoked your natural sympathy with the fledgelings of duty. It may be the angels are solicitous as to how you are to meet the outcome of these beginnings.

These detailed and personal statements are a proper encouragement and satisfaction in our family re-union. We represent diverse interests in a common work and the integrity of each is essential to the general well-being. Particularly is the grouping of this rehearsal fitting as this institution is about to exercise its corporate function and pass over to a new set of graduates, its guaranty of their faithful compliance with the prescribed work of the school, as well as of their fitness to enter upon independent work. The hospital staff, who, by the terms of the contract, are to a degree responsible for their education and pass finally on their qualifications, in this public way express their hearty endorsement of their faithful work and of the excellent papers they have presented in the examinations just concluded, and on their behalf, as well as on that of the superintendent, the managers and the trustees, I offer you, young ladies, congratulations on the completion of your preliminary work, with the hope that your life may be useful and content with the compensations of your chosen calling.

From the vantage-ground of your professional allies may I say a word as to those compensations. Financial, with scarce a doubt. The later civilization, with its social pressure, has called for you and you have responded to the call. Your special education, your promise to be faithful to your trust, your fitness to grow into adaptation to varied social needs, meeting all their requirements, yet unobtrusively, will assure you employment and support. This is your material compensation.

Your education is of small value if it has not opened to you avenues of investigation along which you are to become increasingly advantaged by the study of books. The opportunities for that study will be many as a relief in watching hours and in the employment of leisure days. You will have need of special study for your work, but you will have need of the broader culture to fit you for your place in the new work. He is a dull student of the intellectual heavens who has not seen how surely the star of Sorosis has emerged from the eastern haze and how clearly it shines in the empyrean. We, of whom the Greeks said, "the gods made men" for 6,000 years, or if you trust the unearthed relics of Egypt and Assyria, perchance 6,000,000 years, have borne the burden and heat of the day and kept the universe consolidated by fighting the battles of all time. But the brilliant-hued army that is now forcing the gates and razing the walls of the old *régime* confidently flaunts its banner, gilded with the unfamiliar device that "God made women." This extraordinary and unexpected outcome of the higher criticism is too portentous to be resisted, and although not altogether tired of the contract, we are gradually accepting the unanswerable and patiently awaiting our ultimate disenthralment. You do not know at what time your avenues of investigation may open on some plateau of personal influence. You cannot afford to be unprepared, and this opportunity for literary culture is your intellectual compensation.

I do not know how your spirit is to be calmed into continual content in the trying and exhausting experiences of your work than by the culture of the spirit of service. Whence are you to acquire the imperturbable serenity of temper, the unwavering self-poise, the unfailing judgment and never-faltering ease of demeanor in the lonely and protracted presence of suffering, sorrow and caprice unless devotion to your work is the inspiration of your life. If this is the motive power of your being, I may not give you the benediction of farewell as you pass out to your duties, but rather the salutation of welcome as you come in among us, in the spirit of the institution that has helped you up to this crowning hour, thus to find the spiritual compensation that shall be all-satisfying now and sufficient and inviolate,

> "When the moon is old,
> And the stars are cold,
> And the books of the judgment-day unfold."

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EDITORIAL.

THE BROOKLYN MEDICAL-BOOK CLUB.

The Brooklyn Medical-Book Club was organized March 5, 1892.

The membership which is already complete is limited to twenty.

A Purchasing Committee consisting of the President, Dr. J. T. Conkling, Secretary, Dr. F. H. Stuart, and Dr. J. H. Hunt, will select the books to be purchased. The members of the club will send to the Secretary the titles of any books they desire to be purchased, either such as they wish to consult or as they think valuable for the medical library. No books which would be duplicates of those already in the library will be purchased.

The books are to be deposited, with the permission of the Council, at the library of the Medical Society, whence they may be taken by the members of the club for reading at their own homes. Books may be retained, when thus removed, for two weeks. At the end of the year it is proposed to donate the books to the library of the Society, the club retaining for its members the right at any time to consult the books purchased by the club at their own homes, in the same way as before such donation.

N. Y. PHYSICIANS' MUTUAL AID ASSOCIATION.

This excellent organization through the untiring efforts of its past and present officers, now possesses a membership of 1,106, and pays at the death of each member $1,000, which is the full amount allowed under the by-laws! Every physician, desirous of aiding his fellow practitioner and at the same time of providing for his own family at a time when a little ready money is of more value than ten times the amount at a later period, should become a member.

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ERRORS IN VENTILATION.

In the *Sanitarian* for April and July, Dr. W. H. Thayer discusses this subject in a most interesting and practical way, holding that the outlets for the impure air should be near the ceiling, as to that part of the room the warmed air with its contained carbon dioxide rises, and that the inlets for the warmed pure air should be near the floor and of sufficient size to admit a great volume at a temperature not many degrees above blood-heat, the inlets and outlets being of course, proportioned in size.

Dr. Thayer in the April article, mentioned St. Ann's Church, Brooklyn, as among the buildings in which the ventilation was faulty, the air containing a large amount of carbon dioxide as shown by analysis. In the July article he gives the result of a visit to the church. He says:

"I have examined the warming and ventilating arrangements in St. Ann's Church, in Brooklyn, of whose atmosphere Dr. Bartley made an analysis. I went there just before a forenoon service, when the house might be expected to have the best atmosphere. The air was offensive to the sense of smell, as if it had been at the close of service, in a crowded house without ventilation.

"On investigation, it appeared that no air was admitted to the building, except what might enter while the doors were open. I was informed that there were flues for admitting fresh air at the east end. I looked for the openings of these fresh-air flues on the outside of the church, and found four openings near the ground, each about twelve inches square; but they were all carefully closed by Canton flannel nailed over them! I discovered that the flues from these openings extended to the risers of the chancel steps, with openings there; so that, before they were closed, strong currents of cold air were doubtless discharged in the faces of the occupants of the front pews. The air was evidently shut off as a nuisance, by covering the openings on the outside.

"The excessive foulness of the air was thus accounted for; the outlet flues carry little off, for there is no fresh air to take its place, except what enters while the church-doors are open. We cannot draw air out of a room if we do not provide an inlet for a new supply. I went into the tower—which, by the way, is heated by steam pipes and not by gas, as stated incorrectly in my April paper—and found no current flowing out of the great ventilating pipe that opens from the church. How could there be an outward current, if no air entered the building from the outside? It is not strange that its atmosphere, as analyzed by Dr. Bartley, was fouler than that of any of the numerous halls examined by Dr. R. C. Stiles in 1869."

Dr. Thayer has done a great service in calling attention to this most important question of ventilation, especially in buildings where large numbers of persons congregate, and we sincerely hope that the agitation will not cease until the proper remedy is applied. We hope the doctor will continue his investigations into the ventilation of Brooklyn buildings, including lecture-halls, theatres and churches, and we shall be surprised if he does not find many in which the means of ventilation are as inadequate as in the instance cited.

If at the same time sanitarians, public and private, in other cities than Brooklyn will do the same, great good will be accomplished.

OBITUARY.

JOHN A. RAY, M.D.

Dr. Ray died in Brooklyn on June 22, 1892, at the age of thirty-nine years. He was graduated in medicine at the College of Physicians, New York, in 1874. He was a member of the Medical Society of the County of Kings, and the Kings County Medical Association, and was surgeon to the Brooklyn Eye and Ear Hospital.

HERBERT FEARN, M.D.

Dr. Fearn died in Brooklyn of fatty degeneration of the heart on June 25, 1892, at the age of fifty-eight years. He was born in

England but came to this country in his youth. He obtained his medical degree in 1857 at the New York Medical College. Dr. Fearn was an active member of the profession and was especially known for his advocacy of the treatment of puerperal convulsions by veratrum viride. This treatment, known everywhere as "The Brooklyn Treatment," was described by him in a paper which he read before the Medical Society of the County of Kings in 1871. He was also prominent in the work of the Brooklyn Microscopical Society.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the society rooms, 356 Bridge Street, on Tuesday evening June 21st, at 8 o'clock.

The President, Dr. Z. T. Emery, in the chair.

There were about fifty members present.

The minutes of the May meeting were read and approved.

The report of Council, containing three recommendations, was read and the recommendations voted on separately.

1. The Council beg to report that a committee was appointed by the President to confer with similar committees from the American Gynæcological and Brooklyn Gynæcological Societies, concerning some entertainment of the members and guests of the American Gynæcological Society during its annual meeting to be held in Brooklyn in September next, and present the report of the committee to the society as a recommendation from Council:

"That this society entertain the members and guests of the American Gynæcological Society at lunch, on Wednesday, September 21st, from one to three o'clock, at such place as the committee of the society may select.

"That the members of the Council, the Board of Trustees, and the committee of the society act as hosts on the part of the society.

"That the committee be empowered, the sanction of the Board of Trustees being obtained, to draw upon the Treasurer of the society for the amount of the cost of the lunch.

"That the members of the society be invited to the lunch, each member to pay for his or her ticket on accepting the invitation."

Dr. Chase moved the adoption of the recommendation. Seconded and carried. So ordered.

2. The Council would recommend that inasmuch as the meeting of the society just referred to takes place upon the date of the regular meeting of this society, that the September meeting be held on Tuesday, September 27th next.

On motion, duly seconded and carried, the by-laws were temporarily suspended, and the recommendation adopted.

3. The Council also report that since the last regular meeting of the society, a communication containing charges against a member was submitted to the President, who directed that a special meeting of the Council be called to consider the same.

It was the sense of the Council at this meeting assembled that the above-mentioned charges were well founded, and from the evidence elicited the charges were proven. Therefore the Council would respectfully present the following recommendations :

1st. That the charges of violation of the code and of conduct unbecoming to physicians made against Dr. Chas. N. D. Jones be acted upon.

2d That the action taken in this case be that of suspension.

Upon request, the Secretary gave the particulars of the allegation.

Dr. Stuart moved that the recommendations be adopted.

Dr. Jones in his own behalf requested that action be deferred upon the above recommendations.

Dr. Chase seconded Dr. Stuart's motion.

Dr. Bennett moved as an amendment: That action on these recommendations be deferred until the next meeting. Seconded.

Dr. Henry Conkling dwelt at length upon the value and dignity of membership in this society, and believed that so serious a matter as depriving a member of such privilege should be a question for more serious and deliberate discussion, at a meeting when there was a larger attendance, when the minutes of the Council could be read and the whole matter thoroughly gone into.

Such a course he thought would be more just to the member accused and more in keeping with the dignity of the society.

He wished also to second the amendment.

Dr. Stuart withdrew his motion and accepted the amendment. His former motion was merely for the purpose of bringing the matter before the house. He believed with Dr. Conkling that it was a matter which every member of the society should have a chance to have a voice in, and that if it was made the order of business for the September meeting, a notice to that effect should appear on the usual notice of meeting, so that every member might know that the matter was to come up for decision.

The Secretary stated that the report of these proceedings would appear in the August number of the BROOKLYN MEDICAL JOURNAL. It was the sense of the society that this would be sufficient notice to members, without having it appear on the printed notice of meeting.

After some further discussion, the motion to postpone action on the recommendations until the September meeting was put and carried. So ordered.

ELECTION OF MEMBERS.

The following applicants having been favorably reported upon by Council, were declared elected to membership:

Drs. J. H. Lawrence, R. C. F. Coombs, George E. Reed, Edward Morgan, A. L. Shearman, Charles D. Napier, Henry T. Hotchkiss and A. H. Staub.

The following applications for membership were read: Dr. James A. Donaghue, 12 Underhill Ave., L. I. C. H., 1891; proposed by John A. Polak, M.D.; T. A. York, M.D.

Dr. E. E. Baker, 73 Ft. Greene Place, Medical School of Maine (Med. Dept. Bowdoin College); proposed by Dr. C. F. Barber; Dr. A. C. Brush.

Dr. Wilbur Hall Seymour, Kings County Hospital, L. I. C. H., 1892; proposed by Dr. Wm. M. Hutchinson; Dr. Burr B. Mosher.

Dr. W. P. Bowser, 506 Ninth St., University of City of N. Y., 1877; proposed by Dr. H. W. Rand; Dr. J. A. McCorkle.

SCIENTIFIC BUSINESS.

Topic for the evening: "Functional Diseases of the Alimentary Canal Accompanying Climatic or Temperature Changes."

Dr. Frank W. Shaw read the first paper, on "The Ætiology, Pathology and Clinical History," which was followed by a paper on the "Therapeutics," by Dr. Wm. M. Hutchinson.

Discussion by Drs. Bartley, Briggs and Hutchinson.

The Chair announced the death of Dr. Charles E. De La Vergne, and appointed the following obituary committee: Drs. Jas. W. Fleming, Jos. H. Hunt and Jarvis S. Wight.

On motion, the society adjourned to the fourth Tuesday in September (27th), 1892.

WM. M. HUTCHINSON,
Secretary.

PROGRESS IN MEDICINE.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children, and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief to the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

RUPTURE OF THE UTERUS.

Winter (Centralbl. f. Gynæk., No. 1, 1892) reports the following case of uterine rupture: A rent extended obliquely across the anterior wall, nearly to the os externum, and was complete. At the autopsy the uterus was found strongly anteflexed, and the intestines and parietes had already (within twenty-eight hours) formed adhesions about the rent so as to cut it off from the peritoneal cavity. The patient was a multipara, æt. twenty-nine. After ten hours active labor the waters broke and the pains ceased. Nine hours later, rupture of the uterus occurred, the head slowly receded from the pelvis, and a trifling amount of hæmorrhage took place. The patient was sent to a lying-in hospital. Winter found that the child had entirely escaped into the abdominal cavity and lay immediately under the parietes. The temperature was normal; the pulse 124; there was evidence of peritonitis, but not of much hæmorrhage. W. made a short incision through the abdominal wall and drew out the fœtus and placenta. There was little collapse. The symptoms of peritonitis subsided after the operation, but soon reappeared, and the patient died in twenty-eight hours. He submits the following table of thirty-seven cases of rupture of the uterus, with complete escape of the child into the peritoneal cavity:

TREATMENT.	NO.	DEATHS.
Died undelivered - - - - - - -	5	5
Delivered through the rupture - - - -	8	5
Abdominal section after delivery through the rupture - - - - - - - -	1	1
Abdominal section and delivery through incision; no suturing of uterus - - - - -	12	4
Abdominal section and delivery through incision; suture of uterus - - - - - -	7	5
Porro's operation - - - - - - - -	4	4
Total - - - - - -	37	24

RUPTURE OF THE UTERUS.

Schwarz. (Sunfkinhen, Centralbl. f. Gyn., No. 2, 1892).

CASE I.—Patient æt. twenty-eight years, married eight years. During the first five years suffered several abortions complicated with hæmorrhage and uterine inertia. The sixth child was stillborn near term, the seventh was also born dead; the eighth pregnancy terminated in the birth of a putrid fœtus at full term. Recovery tedious and complicated with endometritis and pleurisy. The ninth child was delivered by version. It was alive and syphilitic. Posterior wall of the uterus torn horizontally just above the cervix and to the extent of fifteen cm. The tear involved the peritonæum The wound was sutured and the uterine cavity packed with iodoform-gauze. The patient rallied under the use of stimulants and made a fairly good recovery.

CASE II.—Patient æt. thirty-two years. Sextipara. Delivery assisted by expressio fœtus. Incomplete laceration of the lower segment of the uterus, five cm. in length. Treated by suture and iodoform-gauze packing. An abscess developed at the site of the laceration and ruptured into the peritonæum, collapse and death promptly following.

INVERSION OF THE UTERUS.

Decio Carlo (Nouv. Arch. d'Obstet. et de Gyn., April, 1892). The author reports two cases of amputation of the uterus on account of inversion. He observes that inversion occurs but once in 19,000 labors. It may occur at the moment of expulsion or extraction of the child or at the close of the third stage. Inertia of the uterus is the essential cause.

The ætiological importance of intra-abdominal pressure and of traction upon the cord, except in inversion of the first degree, the author denies. These causes can produce complete inversion only when associated with inertia of the uterine muscles and the absence of all resistance at the external orifices. The author's views of the ætiology are summed up in the following propositions :

Inertia of the uterus, and above all that of the inferior segment, together with a sufficient dilatation of the cervical orifice is an essential condition of inversion.

Intra-abdominal pressure is incapable of producing inversion.

Traction on the umbilical cord is not of itself alone a competent cause of inversion.

The theory of spontaneous inversion as the result of irregular contractions is not tenable.

Regular contractions may complete the inversion if it has already been begun by other causes.

The infrequency of this accident is explained by the necessity for the coöperation of a large number of causes.

For the treatment of inversion the author recommends amputation when ordinary attempts at reduction fail. Statistics show a lower mortality after ligation, amputation and suture of the stump than under other modes of treatment.

His method is as follows : A provisional elastic ligature like that of Esmarch is applied for hæmostasis. An incision is made cautiously through the anterior wall of the uterus in the median line. The cavity is then explored with the finger, and if an intestinal loop is found it must be gently reduced after loosening the elastic band. Adhesions, if any, are separated with the finger, this done, after again tightening the ligature the operator immediately proceeds to pass the suture.

The uterus is then amputated below the ligature with bistoury or scissors. The sutures, which traverse the entire thickness of the stump, are tied. The band must be removed cautiously, and if there is no hæmorrhage the vagina is packed with iodoform-gauze.

TOXICITY OF THE BLOOD-SERUM IN ECLAMPSIA.

Chambrient (Nouv. Arch. d'Obstet. et de Gyn., vol. vii., No. 4) has found that toxic effects are produced in rabbits by the subcutaneous injection of blood-serum from an eclamptic woman in the proportion of ten cc. of serum for each kilogram of the rabbit's weight. A still smaller dose from another patient caused fatal convulsions. The uro-toxic coefficient of the first patient was (0.18); that of the second was (0.11). There is an inverse relation between the urinary toxicity and the toxicity of the serum in patients with eclampsia.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

THE ÆTIOLOGY OF SOME FORMS OF PELVIC INFLAMMATION.

In the "Edinburg Medical Journal" for February, Dr. Robert Bell shows the close relationship which exists between diseases of the ovaries and morbid conditions, either idiopathic or traumatic, of the cervix uteri.

Just at this time, when the necessity for Emmet's operation is so vehemently denied throughout Great Britain, Dr. Bell's opinions seem especially noteworthy.

A close study of the cases of ovaritis which come under our care will soon convince the most sceptical of us that the trouble usually results from morbid conditions of the uterus. To say the least, inflammation of the ovaries is nearly always preceded by a like condition of the lining membrane of the uterus. It, moreover, seems likely that ovarian irritation follows more often from trouble in the cervix than from disease in the body of the organ.

That a close nervous relation exists between the cervix and ovaries is proven by the fact that an applicator passed along the cervical canal causes subsequent pain in the diseased ovary. A still more logical proof awaits us when we consider that the ovaritis following laceration of the cervix always occurs on the side of the injury. The disease of the ovary does not yield to treatment until the cervical injury has been repaired. As both the afferent and efferent vessels of the ovaries are continuous with those of the uterus it must follow that when the circulation of the latter is interfered with, as occurs in endometritis, the former must suffer as well. The effect must be the same from the relation of the two parts through the sympathetic nerve. A congestion in one must cause a like condition in the other, and it is equally evident that with the removal of irritation in the organ primarily affected the morbid condition in the one secondarily affected must yield also if it has not gone too far. If cystic degeneration has taken place nothing short of a radical operation will avail.

There can be no doubt but what lacerations of the cervix are a fruitful source of uterine and ovarian disease. In the cases thus produced if surgical repair is resorted to promptly the ovarian disturbance will disappear. If cervical troubles are allowed to persist they will not end where they began, but are likely to progress into the cavity of the uterus and, perhaps, by continuity of tissue through the tubes. Flexions often result from this cause.

The author reports two cases:

Mrs. B. recovered in a satisfactory manner after her confinement, in which she gave birth to a large boy, but a severe pain, aggravated by exertion, appeared in the left side in about six weeks. With the pain came a muco-purulent vaginal discharge and bearing down pains with tenderness over the ovary. The uterus was found to have sustained a severe laceration on the *left side*. It was also retroflexed and hypertrophied. Endometritis was present. Intra-uterine applications of iodized phenol and vaginal tampons of glycerine, of alum and boracic acid were used to correct the displacement. After the endometritis had in a measure subsided the cervix was repaired and the patient was restored to health.

Mrs. H. had suffered before her marriage from dysmenorrhœa, leucorrhœa and menorrhagia. After marriage came great prostration of mind and body with pain in both ovaries. The ovaries were found to be enlarged and tender. The uterus was congested and retroflexed. Dyspareunia existed to a prohibitive degree. Treatment consisted of an application once a week of iodized phenol to the endometrium. The uterus was restored to its normal relations by the use of tampons, as in the case of Mrs. B. In four months the evil symptoms had disappeared and within a year the patient became pregnant.

The author states in closing, his opinion, that by proper local treatment, medical and surgical, to the uterus, the removal of the ovaries may often be avoided.

RECOVERY FROM OSTEOMALACIA FOLLOWING PORRO'S OPERATION.

Everke (Deutsche medicinische Wochenschrift, No. 4, 1892) performed Porro's operation on a woman affected with osteomalacia, whom violent pains rendered unable to walk for three years. The operation was made at her confinement, and following the amputation of the uterus and ovaries, she entirely recovered from the osteomalacia.

It follows from the above that to cure the disease it is not only proper to perform Porro's Cæsarean section, but that in osteomalacia in unimpregnated women, ovariotomy is advisable.

In ovariotomy the classical Cæsarean section is not preferable to Porro's operation, as the former is more difficult and prolonged. And furthermore, there would be no object in leaving a womb without ovaries.

Porro's operation can be performed before labor-pains have set in without danger of hæmorrhage from atonicity of the womb, while in Cæsarean section bleeding, during parturition, is often perilous.

Everke placed the pedicle extraperitoneal; he fixed the stump to the abdominal walls in the upper and lower angles of the incision and in its centre, by thick silk sutures, traversing the abdominal parietes and the stump. He drew the stumps of the broad ligaments out with forceps and compressed them with the same sutures that held the stumps. Thus safety from secondary hæmorrhage was assured, and owing to the pedicle being secured extraperitoneally infection of the wound was also avoided.

PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital.

SOME ERRORS IN TESTING FOR SUGAR IN URINE.

George Johnson (Brit. Med. Jour.) refers once more to his own test for sugar. In using some of the tests for sugar a reaction occurs similar to that of diabetic urine, where, in reality neither glycosuria nor diabetes exist. Fehling's solution will occasionally give the yellow color in specimens of urine containing no sugar. The same sometimes occurs with Moore's test. These changes, simulating the reaction due to sugar, are from uric acid or creatinin. *No sugar is present in normal urine.* The substances mentioned may be removed by mercuric chloride, after which no reaction will be found. The author's own test never shows changes from uric acid or creatinin. It is used as follows: One drachm of a saturated solution of picric acid, one drachm of the urine, and half a drachm of liquor potassæ are boiled. If sugar be present a claret color is produced. The presence of albumen does not interfere with the test.

The above note emphasizes the importance of using a second test whenever the sugar reaction is found. Although, on the other hand, as the tests all find sugar, the second examination is not necessary, if the first be negative.

PYOKTANIN—TINCTURE OF IRON.

Squibb (Ephemeris, April, 1892) states that pyoktanin is the trade name of an aniline dye used for staining purposes. It is also thought to be a powerful antiseptic and germ destroyer. It may be obtained in a purple or yellow powder. In general surgery the first has been used; in eye work the second is employed. Cystitis and urethritis have been treated by injections in the strength of 1-3000, increasing to 1-1500. For ulcers and wounds the powder may be used. It has been of value in cancer. The use of the drug would be objectionable in private practice, as it stains everything it touches, although Dr. Squibb states that soap-lather vigorously applied, followed by alcohol, will remove all discoloration.

To the above may be added a mention of its use as a local application in diphtheria as but recently recorded by Dr. Lincoln. We have seen a large bed sore treated by the powder (twenty-five per cent.) with some benefit.

In the same number of the "Ephemeris," Dr. Squibb refers to the making of tincture of iron. Its action of late years has not been equal to that of former times. This is said to be due to a change in the method of making. The pharmacopœia of 1870 suggested that there should be an excess of acid and that the solution should not be used for some months. Ethers were thus developed, increasing the action of the drug. As made to-day only enough acid to give the reaction is used, and no ethers result. Dr. Squibb strongly recommends a return to the method of 1870.

THE URINE IN PHTHISIS.

Hale-White (Brit. Med. Jour.) reports two conditions found in the urine of phthisical patients. The specimens were 182 in number. The urine *remained acid* for a greater length of time than is usual. One specimen kept the reaction for four months. From the sediment found the author believes that a form of acid fermentation had existed, yeast-like organisms in abundance with few bacilli being found. The reverse is found in alkaline changes. The second condition was a gradual change in color, the specimens becoming black. This remained for a long time. These changes are considered as due to the tubercle-bacilli.

POST-EXPIRATORY FRICTION SOUND.

Anderson (Lancet, May, 1892) describes a sound heard in a number of cases, two of which are recorded. This sound was heard posteriorly in both cases. It is a friction sound, more or less jerky, and short, coming when expiration has entirely ceased. He believes it may come from one surface of the thickened pleura catching on the other, and from the movement of the lung after expiration. One surface of the pleura may be held by the other and then suddenly released.

This is a very interesting sign, but we think one possible cause has been overlooked, *i. e.*, *cardiac action*. The movement of the heart itself can produce movement in the lung. The hearing of the sound posteriorly would mean transmission of movement backward, and could be explained by the stretching of pleuritic adhesion due to cardiac action.

TREATMENT OF DIPHTHERIA.

C. Smith (Therapeutic Gazette) reports results from the use in this disease of inhalations of carbolic acid one part, eucalyptus one part, turpentine eight to four parts. The patient is in bed; a tent is arranged; the clothing is light; two cloths, one foot square, saturated with the above mixture, are placed near the head; boiling water is placed in a convenient place, the steam thus made causes a vapor from the cloths to be thrown off. These cloths are to be kept moist. The nostrils should be plugged.

The results come in twenty-four hours. The healthy tissue becomes red, the patches decrease, the exudation dissolves and disappears. The membrane is left red and inflamed. The amount of turpentine should then be diminished. The inhalation should be continued for twenty-four hours after the subsidence of the local conditions. Mouth respiration affects the interior parts; nasal, the posterior. General treatment should be employed.

CEREBRAL LOCALIZATION.

D. Ferrier (Cameron, Lecturer Univ. Edin., 1892, in Edin. Med. Jour., April) after an introduction reviewing the work in this department of medicine, states that all parts of the cortex of the brain have not the same use, but are divided into areas which have relation to the senses and to motion. Subdivisions of these areas exist which control special acts. There are centres for vision; for hearing; for smelling; for tasting; for sensation, and for all and every movement. So distinct and separate are these various parts that injury, even to a considerable degree, of the brain does not necessarily cause loss of motion and sensation throughout the body, as the remaining parts may suffice for all ordinary conditions. Under antiseptic precautions trephining has again come into use and is without risk. The brain can be cut, handled, parts removed, without harm. The mortality of cranial injuries has fallen from 50 to 15 per cent.

Epilepsy, medically and surgically, is considered, and the author then discusses cerebral tumors. Ninety per cent. of such tumors are so placed in the brain that surgical interference is impossible. These, however, can be located. Patients operated upon for such a condition may die from septic infection, shock, asthenia. The growth may return. Thirty-two successful cases have been recorded, permanent recovery taking place in fifty per cent.

One important part of the paper is in relation to non-traumatic cerebral abscess. This is generally related to *diseases of the middle ear, acute or chronic.* Symptoms pointing to the special senses, to motion or to sensation, may be present. Obscure and long-continued symptoms occurring in ear cases should suggest the possibility of involvement of some cerebral area.

PREVENTIVE MEDICINE.

BY E. H. BARTLEY, M.D.,

Professor of Chemistry and Toxicology, and Lecturer on Diseases of Children, Long Island College Hospital.

EXTENT AND CHARACTER OF FOOD ADULTERATIONS.

The above is the title of a special report published as Bulletin 32 of the United States Department of Agriculture, Division of Chemistry. The report was made by request of Congress, and is signed by A. J. Wedderburn. It is chiefly a compilation from various sources in this country, but principally from official reports of the dairy commissioners, state boards of health, and replies received from a circular letter of inquiry. The report is a fair and impartial reflection of the sentiment of public officials and others especially interested in pure food, and the opinion is almost unanimous that we need some national legislation on the subject.

On the question of the character of the adulterations of foods, the author states that the great mass of the adulterants are harmless to health, but are commercial frauds. In a few cases, however, sickness and even death has resulted from certain poisonous pigments, essences, etc. In some cases, as is the case with milk, the consumer may suffer in health from the abstraction of the nourishment, and from altering the natural proportions of the ingredients, or from rendering some one of these ingredients non-assimilable.

The author says it is safe to estimate that at least fifteen per cent. of the entire food product of the country is adulterated in one form or another, the overwhelming proportion of which is sold under fraudulent brands. The cost to the country on food alone, because of this adulteration, he estimates to be about $700,000,000 annually. It is estimated by Dr. Abbott, of Massachusetts, that in that State the results of the work of inspections and prosecutions saved to the State in 1886, $750,000, while the appropriation for 1890 was only $95,000. This the author uses as an argument in urging the necessity for national inspection of foods and drugs. The fraudulent branding of goods intended for food the author regards as the greatest evil connected with the whole subject, and he desires a federal law, making it a crime to brand "compounded" or adulterated goods as "pure."

On the subject of adulterations of drugs no new data are presented. He quotes the results obtained in Pennsylvania, Massachusetts, New York, New Jersey and a few other States. In New

Jersey, in 1889, the inspections showed that 65 per cent. of the drugs examined did not conform to the United States Pharmacopœia standards. In 1890, 40 per cent. were found adulterated in this sense.

A report of the Pharmaceutical Association of Pennsylvania for 1889, shows that in that State, of seventy-seven samples of laudanum assayed, only four were of standard strength, nine more were near enough to be within the limits of reasonable error, and five failed to yield a weighable amount of morphine. In one store in Philadelphia, owned by a graduate in pharmacy, there was sold blue ointment composed of lard, colored with Prussian blue, with no trace of mercury. The report of the same association for 1890 showed a condition of affairs that is a disgrace to the retail pharmacists of that State.

In Massachusetts, because of a more efficient inspection of foods and drugs, the analyses show a better state of affairs. In 1884 the inspections showed 60.3 per cent. of foods, and 36.8 per cent. of drugs, adulterated. In 1889, 33.8 per cent. of foods, and 16.2 per cent. of drugs, were found adulterated.

In the State of New York, as stated in the report of the State Board of Health for 1890, of 532 samples of drugs examined there were of good quality 233, or 43.8 per cent.; fair quality, 54, or 10.2 per cent.; inferior quality, 130, or 24.4 per cent.; not as called for, 33, or 6.2 per cent.; excessive strength, 24, or 4.5 per cent.; fictitious, 58, or 10.9 per cent.

It will be seen from this table that a little over 50 per cent. of the prescriptions sent to the drug stores in this State are made up according to the standards the physician intends to have used when he writes them. Of 41 samples of quinine capsules and 99 samples of quinine pills none contained what was claimed. The 3-grain capsules contained from 2.69 to 3.63 grains each; the 5-grain capsules from 3.48 to 4.97 grains each. Of 35 analyses of morphine sulphate pills, over 50 per cent. were found from 10 to 33 per cent. short in weight. The hypodermic tablets gave results varying from 10 to 30 per cent from the claimed contents. Of 12 samples of tincture of opium examined all were below the United States Pharmacopœia standard, varying from 50 to 70 per cent. of the full strength. Of 49 samples of Hoffman's anodyne 39 were of marked inferior quality. Of 68 samples of stronger ether (that used for anæsthetic purposes.—E. H. B.), 40 were good and 22 inferior.

The dilute mineral acids, by the United States Pharmacopœia should contain 10 per cent. of absolute acid. The examinations gave the following results:

No. examined.	Name.	Below 10%.	Above 10%.
38	Hydrobromic acid dil.	6	6
10	Hydrochloric acid dil.	2	0
4	Nitric acid dil.	0	3
53	Sulphuric acid dil.	1	9

In the case of nitric acid the strongest gave 16.7 per cent. and the strongest sulphuric gave 24.8 per cent. of absolute acid.

One-half of the bulletin in question is devoted to the publication of the special laws of the fifteen States that have enacted laws upon the subject of food and drug adulteration. In some of these States a special commission is established to carry out the provisions of these enactments, while in others it is made the duty of the state boards of health. The report also includes the laws of England and Canada upon this subject.

OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

Assistant Surgeon, Brooklyn Eye and Ear Hospital.

LYMPH-STREAMS AND LYMPH-CHANNELS OF THE EYE.

Gifford (Arch. of Ophthal., April, 1892) publishes the results of his continued experiments in this field during the past six years. His method consists in the injection of solutions, or rather suspensions of various pigmented substances, into the living eye, the transportation of the pigment granules by the lymph-currents being then microscopically noted. Besides cinnabar and India ink he has used fluorescein, ferrocyanide of potassium, asphalt chloroform and a solution of alkanet in turpentine. The fluorescein and ferrocyanide methods are not calculated to give trustworthy results in determining the physiological currents in the eye. Many of the blue lines obtained by the latter solution represent simply the boundaries between tissue into which the ferrocyanide has diffused and that containing none, and those upon which most stress has been laid can be obtained equally well in the dead eye. Recent experiments have lead the author to somewhat modify his views as to the lymph-current between the intervaginal and perichoroidal spaces. While it must be admitted that there are open channels between these spaces, the evidence is decidedly against the existence of any current in them from behind forward. Pigment injected into the intervaginal space passes into the orbital tissues along the central retinal vessels, which traverse this space as they enter the optic nerve just behind the eye. It also penetrates the dural sheath along the smaller blood-vessels and passes forward into Tenon's space as far as the equator of the eye. It also penetrates the pial sheath following the small vessels toward the centre of the optic nerve. Finally, where the central vessels leave the nerve, although there can be no doubt that the main current is out into the orbit, a small quantity of pigment nevertheless finds its way forward toward the vitreous, either carried by the leucocytes or a possible occasional reversal of the current. Gifford no longer believes in any strong current setting toward the cranial cavity in the orbital tissue about the nerve, but rather that there is no decided stream, the pigment becoming quite evenly distributed in consequence of movements of the eye and body and the influence of gravitation.

In Tenon's space and the subconjunctival tissue there is no decided stream in either direction in the rabbit, while in man such evidence as exists would tend to show a current setting toward the cornea.

Further injections of pigment and anthrax bacilli into the vitreous have confirmed the author's previous results. The pigment passes both backward and forward, backward along the central retinal vessels and from them to the communicating lymph-spaces, and forward through the suspensory ligament of the lens to the posterior chamber. From the posterior chamber the granules reach the anterior chamber through the pupil, thence passing into the tissue at the iris root and the spaces of Fontana. Considerable pigment sometimes accumulates at the ora serrata whence some may be carried by leucocytes into the space between the retinal pigment epithelium and the rods and cones. It commonly penetrates neither the retinal pigment nor the pigment layers of the iris. In the vitreous itself some pigment always remains, usually in clumps on the surface of the retina either free or in leucocytes. Sometimes the leucocytes carry it even into the retinal tissue. The position of the pigment remaining in the vitreous seems to bear no special relation to the canal of Cloquet.

Pigment injected into the posterior chamber passes chiefly forward through the pupil. What remains is usually taken up by the leucocytes which are then later found in the anterior chamber, the iris root or perhaps even the zonula or anterior part of the vitreous. While an occasional leucocyte may possibly pass through the zonula there is no evidence of any flow from the posterior chamber to the vitreous.

Observers have differed considerably in opinion as to the outlets of the anterior chamber at the sclero-corneal junction, some believing that free openings exist directly into the blood-vessels, others that only the perivascular lymph spaces communicate directly with the anterior chamber.

Gifford holds that free pigment (injected into the chamber) passes directly into the blood-vessels of the sclero-corneal junction and from these into the vessels of the choroid and subconjunctival tissue.

In regard to the histology of this communication one often sees in sections an apparently solid column of pigment and pigmented leucocytes continuing from Fontana's spaces directly into a blood-vessel without any apparent interruption, as if the entire lumen of the vessel were an opening in the wall of these spaces. In other sections the vessels communicate with the spaces by short lateral diverticula. No positive conclusion is reached as to the presence of valves in these channels of communication. Theoretically they are not necessary, as the pressure in the chamber is normally much higher than in the veins. Besides into the vessels the pigment passes from Fontana's spaces into the lymph spaces of the iris root, the ciliary processes, choroid, sclera and the innermost layers of the cornea near the chamber angle. The ciliary muscle is usually left free, and the pigment in the cornea passes by way of the lymph spaces of the chamber angle and not through Descemet's membrane.

With Schwalbe the author regards the so-called canal of Schlemm as part of the venous system which, probably on account of pressure differences, usually contains little or no blood.

Gifford concludes as follows:

1. The view of Stilling that there is no outlet from the vitreous forward around the lens is incorrect. The zonula is freely permeable for solid particles, free pigment being carried regularly from the vitreous into the anterior chamber. The failure of the attempts to inject the anterior chamber from the vitreous is probably due to the closure of the chamber angle from the increased vitreous tension. It is probable that the fluid secreted by the ciliary processes, posterior to the zonula, divides into two portions, one part passing forward into the posterior chamber and thence through the pupil into the anterior chamber; the other passing back through the vitreous and out through the central canal of the opticus into the tissues of the orbit.

2d. There is no evidence of any current passing from the posterior chamber through the iris root. Pigment-bearing leucocytes may pass into the latter from either posterior or anterior chambers, much more readily, however, from the latter from which they sometimes pass clear through the iris into the posterior chamber. The blue line in the iris root obtained by the ferrocyanide method can be obtained perfectly well in the dead eye.

3d. There is no evidence of any current from the anterior chamber through the membrane of Descemet into the cornea. Pigment particles from the aqueous are taken up by the protoplasm of Descemet's epithelial cells; not so much by the cement substance between them. Experiments on both dead and living animals show a free connection for non-diffusible substances between Fontana's space and the circumcorneal veins. It is, therefore, probable that the greater part of the aqueous leaves the eye in this way. Other finer lymph-channels lead from Fontana's spaces into the posterior layers of the cornea, into the perivascular spaces of the sclero-corneal junction (possibly), into the sclera, choroid, and perichoroidal space. Wherever these channels communicate with spaces in which there is a lower pressure than that within the anterior chamber they must on the whole serve to some extent as outlets. This also applies to the perichoroidal space, which, beside being connected with the intervaginal space, communicates with the space of Tenon by numerous lymph-channels surrounding the vessels and nerves which pierce the sclera. In the finer channels apparently free pigment seems to pass indifferently in any direction.

4th. Between the retinal pigment and the layer of rods and cones is a tolerably well-defined space, from which pigment passes freely into the retina, but hardly or not at all into the choroid proper, except along occasional penetrating blood-vessels in the neighborhood of the optic nerve.

5th. While certain facts, such as the regular passage of pigment and bacilli from Fontana's spaces into the cornea and the progress of subconjunctival hæmorrhages in the same direction, together with the impermeability of Descemet's membrane from behind, speak for the nourishment of the cornea from the periphery, the corneal lymph-stream, if any exists, is too weak to perceptibly affect the diffusion of fluorescein or the progress of pigment particles through its tissues.

OTOLOGY.

BY J. E. SHEPPARD, M.D.,

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ON THE ABUSE OF POLITZER'S METHOD OF INFLATION, IN THE TREATMENT OF EAR DISEASE.

Prof. Bürkner (Berl. klin. Wochensch., November 3, 1890), while acknowledging the value to otology of this epoch-making measure, deals with its limitations and the contra-indications to its use. Attention is first called to the fact that in Politzerization the air enters both ears, and, in case of unilateral obstruction of the Eustachian tube, may be forced so much the more easily into the sound ear. This increased pressure causes in the sound ear, as Politzer has indicated, a feeling of fulness, and a diminution of hearing, which, by frequent repetition, may permanently harm the previously good ear. A clearly perceptible relaxation of the tympanic membrane shows itself then as the cause of the occasional considerable lessening of the hearing power.

B. would therefore limit the use of this method of inflation to the suppurating cases, to those suffering from bilateral non-sclerotic catarrh, and to certain phases of acute catarrh, particularly when these conditions occur in children. In unilateral affections, on the contrary, and, whenever practical, in adults, the Eustachian catheter is to be preferred. Some curious instances are then related of its use in cases where it was not only not indicated, *e. g.*, harmless affections of the external canal, cerumen, etc., but where it was absolutely contra-indicated, as in labyrinthine troubles, and in sclerotic middle-ear catarrh. Of the self-treatment of patients with the Politzer-bag, B. has little good to say. It is a dangerous weapon in the hands of the people, who rarely follow the physician's directions, who inflate too frequently, and (in unilateral affections) devote more attention to improving the bad ear, than to the at first temporary, later permanent, dulness and hardness of hearing in the good ear. Persisting tinnitus may also develop after too extended use of Politzerization. The giving of the bag to the patient leads, from its having done good in one case, to its going the round of his friends who suffer from ear trouble, thus doing harm enough. Rupture of the membrane occurs not only from Politzerization, but also from the catheter, but only in already diseased, abnormally thin, calcified, or irregularly stretched membranes. B. mentions further the frequently occurring, forcible entrance of the compressed air into the patient's stomach, which is so disagreeable to many patients that they prefer the use of the catheter.

[A further abuse of Politzerization is seen in some of our American clinics in the extension of its use, even in cases where it is indicated, over a period of months and months, the result (and I regret to say it is not infrequently seen) being an atrophy of one or both membranes, and the patient in a worse condition than before treatment.—J. E. S.]

THE CLINICAL SIGNIFICANCE OF CERTAIN PERFORATIONS OF THE MEMBRANA TYMPANI.

Müller (Archiv. f. Ohrenheilkunde, B. xxxii., H. 2) speaks only of perforations occurring in acute and chronic inflammations of the middle ear. Those occurring in the membrana vibrans he divides into central, intermediary and peripheral. As to form he divides them into round, oval, kidney-shaped, heart-shaped and total, besides the conical or teat-like perforations. Small intermediary perforations, round or oval, occurring with acute inflammations, usually heal kindly with complete organic and functional restitution, unless occurring at the position of the light reflex, in which case they are much more difficult to heal, and cause much greater functional disturbance. Hence paracentesis should never be performed at this point, but always in the posterior half of the membrane.

Peripheral perforations should always arouse suspicion of an underlying circumscribed caries of the annulus tympanicus. In central perforations, kidney-shaped, heart-shaped, or total, the hammer-handle, if not partially or entirely thrown off from caries, may remain in its normal position, or be more or less retracted, according as the tendon of the tensor tympani muscle is destroyed or retained. These large perforations heal with difficulty or not at all. Tenotomy of the tensor tympani in such cases, as well as in small perforations in the region of the light reflex, has given good results. In very extensive perforations, the operation should be extended so as to include removal of the malleus, and often of the incus. As a preliminary to these operations it should always be determined that the mobility of the stapes is unimpaired. This treatment is at the same time the most likely one to cure the otorrhœa. M.'s experience with the teat-like perforations, and in this he differs from many writers, is that they heal kindly with the ordinary methods of treatment.

Perforations in the membrana flaccida (Shrapnell's membrane), accompanied with a history of prolonged, or of frequently recurring otorrhœa, which, despite treatment, will not heal, or, if they heal, are followed by repeated outbreaks preceded by severe, localized pain, with often a cachectic appearance of patient, indicate with great probability a carious process in the tympanic attic, usually caries of the head and neck of malleus. If the perforation is in the posterior portion of Shrapnell's membrane, caries of incus is probable.

M. then reports nine cases (six of perforation in the light reflex, three large central perforations), in which Prof. Kessel performed tenotomy of the tensor tympani, and, in one case, removal of the malleus. The results were: Entire cessation of discharge in all cases; great improvement of hearing in seven cases, two cases remaining as before; in two cases entire relief of troublesome tinnitus. In none of the cases was there closure of the perforation.

DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

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TRACHEAL SYPHILIS.

Jonathan Wright. Syphilis in this locality is rare and difficult to differentiate from tuberculosis of trachea.

The disease commonly evidences itself by extensive ulcerative processes, occasionally by gummy tumors.

The ulceration may be regarded as a tertiary symptom, usually denudation, necrosis, and expulsion of necrosed tissues follow. In more favorable cases, marked cicatrization results. This process begins at lower extremity of trachea and progresses upward, the scar extending at times the length of the trachea and showing strong tendency to contract. When this takes place, firm bands of fibrous tissue of low vitality are found across the tube, seriously occluding its lumen.

The ulceration may affect the trachea only, the larynx showing no evidence of destructive metamorphosis; the bronchi are still less often the seat of this disease. The extremities of trachea are more frequently affected in the middle portion. The cicatrization may be slight or completely occlude the trachea. Gerhardt gives the disease three stages.

1. Irritation, or ulceration.
2. Dyspnœa, or cicatrization.
3. Suffocation or permanent stenosis.

The initial symptoms are: tracheal discomfort, profuse expectoration of purulent and bloody mucus, burning pain and tenderness along the trachea, slight dysphagia and dyspnœa.

The prognosis is always grave, the disease generally is not diagnosed until well advanced. Iodide of potassium should be pushed to point of tolerance as rapidly as the condition of the patient will permit. If the stenosis is high in trachea, O'Dwyer's long tubes may give relief; occasionally tracheotomy is permissible, and good results have been obtained from gradual dilatation, the tube showing but slight tendency to secondary contraction on account of the rigidity of its walls.

SERIOUS RESULT FROM RETENTION OF NASAL DISCHARGE.

Middlemas Hunt (Jour. Lar. and Rhinology, vol. vi., No. 1). A report of two cases of nasal obstruction, previously diagnosed, one as malignant disease of the nose, the other as syphilis. In both there was excessive neuralgic pain in eyeball and forehead on side of obstructed nostril, causing insomnia. Discharge profuse, thick and purulent and very offensive. Lachrymal duct obstructed and loss of sense of smell.

Side of face swollen, eye slightly protruding. Nostril filled by pale, œdematous growth, which bled freely on being depressed by point of a probe. The obstructing body proved to be a mass of hypertrophied mucous membrane springing from anterior extremity of middle turbinated tissue, this acted as a valve to exit from the nostril and caused the retention of a mass of putrid nasal secretion.

The hypertrophy was destroyed by galvano-cautery and the accumulation behind it removed, and an antiseptic nose wash prescribed. Both cases speedily recovered under this treatment.

These cases may be explained as follows: An acute nasal catarrh resulted in inflammation of frontal sinus. The thickened mucous membrane caused a retention of the nasal secretion, which, becoming inspissated, caused the pain and deformity.

The rapid cessation of inflammation and other symptoms eliminate the possibility of antral disease.

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CHILDREN AND THEIR DISEASES.

BY FRANCIS HART STUART, A.M., M.D.

MEASLES AND SCARLET FEVER IN THE SAME PATIENT.

Dr. W. P. Northrup (Archives of Pediatrics, April, 1892) reports five cases in which these two diseases co-existed.

Case I.—Private practice. A four-year-old girl complained for a few days of languor, headache and loss of appetite. Then appeared characteristic measles, eruption beginning behind the ears and upon the forehead; there were also eye symptoms with coryza and cough; coated tongue. Upon the soft palate was a mixed eruption, uniformly distributed, finely punctate redness, with numerous discrete, bright red blotches, giving the very appearance later to be seen on the back. Apart from the pharynx, the diagnosis was clearly straightforward measles.

Four days later, as the measles eruption was fading from the face, the neck and eyes becoming normal, the child seemed suddenly to become worse, feverish, dull and listless. On the neck and chest was now a typical scarlet fever eruption. As for the throat the blotches had disappeared, but the fine punctate redness was much brighter. This double disease presented the following stages of four days each:

The first.—Prodromal, malaise, four days.

The second.—Measles eruption, eruption four days.

The third.—Scarlatina eruption, four days.

On the sixth day both eruptions were plainly seen on the back, both perfectly characteristic. After desquamation the patient made a good recovery; no albuminuria. The child was thin and anæmic for several months in spite of a good summer in Saratoga, and returned to town with an obstinate naso-pharyngeal catarrh. She has since become perfectly well.

Points of interest.—(1) The child has always been carefully tended and watched; never went to school nor with other children; lives in a large open block only a few doors from Central Park. At that particular time there was almost no contagious diseases among children in the city. How did she acquire this double infection?

(2) Mixed eruption was plainly seen on the velum at the first visit. It was no less distinct upon the back subsequently.

(3) Within eight days this patient passed through the eruptive stages of two diseases, the two eruptions being present together on certain parts of the body.

Case II.—New York Foundling Hospital. A four-year-old child sickened with typical measles; symptoms: lachrymosis, coryza, cough, eruption, elevated temperature. Five days later eruption disappeared. On the afternoon of this day temperature mounted suddenly to 102°–104°; vomiting; following morning, typical scarlatina eruption; recovery. This child was taken from a ward in which were measles and scarlet fever together.

Five days after the first measles eruption appeared scarlet fever eruption.

Case III.—A two-and-a-half-year-old child; all accompanying typical measles symptoms. Six days later, as the measles eruption was disappearing, the temperature suddenly mounted to 105°; scarlet fever eruption; swelling of the neck; pharyngitis; prostration; sepsis; death.

From the first measles eruption to the first scarlet fever eruption, six days.

Case IV.—A four-year-old child developed, after marked prodromal symptoms, typical measles. Three days later, with elevated temperature, scarlet fever appeared, also typical. In the ward from which this child was taken, measles had been prevalent.

Both diseases were typical, the second appearing three days after the first.

Case V.—A four-year-old child. Scarlet fever with usual symptoms. Three days later measles; recovery.

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NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

The International Medical Annual and Practitioner's Index for 1892. Edited by P. W. Williams, M.D., Secretary of Staff, assisted by a corps of thirty-two collaborators—European and American—specialists in their several departments. 644 octavo pages. Illustrated. $2.75. New York: E. B. Treat, publisher, 5 Cooper Union.

Part One comprises the new remedies, together with an extended review of the therapeutic progress of the year.

Part Two, comprising the major portion of the book, is given to the consideration of new treatment; and is a retrospect of the year's work, with numerous original articles by eminent authorities.

The Third—and last part—is made up of miscellaneous articles, such as "Recent Advances in Bacteriology," "Medical Photography," "Sanitary Science," "Use of Suppositories in the Treatment of Disease," "Improvements in Pharmacy," "New Inventions in Instruments and Appliances," "Books of the Year," etc.

The arrangement of the work is alphabetical, and with its complete index, makes it a reference book of rare worth.

In short, the "Annual" is what it claims to be—a recapitulation of the year's progress in medicine, serving to keep the practitioner abreast of the times with reference to the medical literature of the world.

Among the new instruments which are deemed worthy of mention is the ether inhaler devised by J. S. Wight, which possesses the following advantages over other inhalers now in use. "It produces anæsthesia quickly and safely; it removes the products of respiration; it does not permit the liquid ether to run into the nose and throat of the patient; it can be kept aseptic; it economizes the ether."

The needle forceps of Dr. J. R. Warbasse is also mentioned among the new instruments. This is adapted to all the varieties of needles, especially the Hagedorn, which cannot escape from its grasp even when thrust through dense and resisting tissues.

A MANUAL OF OPERATIVE SURGERY. By Frederick Treves, F.R.C.S., Surgeon to and Lecturer on Anatomy at the London Hospital. In two octavo volumes containing 1,550 pp., with 422 illustrations, mostly original. Philadelphia, 1892: Lea Bros. & Co.

The work of Mr. Treves opens with a quotation from Sir James Paget, in which the sound advice is given that every patient, the subject of an intended operation, should be subjected to a careful examination as to the risks to his life which the proposed operation involves. While, on the one hand, in emergency and life-saving operations the surgeon may not be blamed if he permits but few considerations save the one great need to have weight in his decision; on the other hand, in the class of cases known as operations for convenience, the conscientious operator will carefully entertain every circumstance which may effect the patient's well-being. A review of the general circumstances to be taken into account by any surgeon who would practice his art with credit and success, in forming a proper estimate of the risks involved in operations, so far as the patient is concerned, follows. Admirable as are some of the points made by the author in this connection, it is evident that the influence of some of the statistics of the pre-aseptic era still clings to his pen. This is particulary noticeable in the paragraphs upon age, and the effect which it exercises upon the results of operation. Here again Sir James Paget is extensively quoted. It is to be regretted that more recent data are not available upon this subject. An expression of opinion upon this point would probably elicit the fact that sepsis plays quite as important a part as age in influencing the result, in the judgment of modern surgeons.

Under the head of the "Preparation of the Patient" the details are all too meagre. This is the more noticeable when it is considered that the writer devotes an entire chapter to the inter-scapulo-thoracic amputation, an operation which many surgeons of extensive experience have never been called upon to perform in the course of a long professional career. To this most important subject much greater space might be profitably devoted. The advice to postpone until the patient is being anæsthetized, the shaving of the axillary or pubic hair, is startling, to say the least, in a work claiming to deal with modern methods of operative technique.

Commendable stress is laid upon the necessity of precision on the part of the surgeon, and the importance of having carefully trained assistants. Some hints as to precise methods of disinfecting the surgeon's hands and instruments prior to an operation, as well as the necessity of having the latter so constructed as to be readily taken apart for purposes of thoroughly cleaning, would greatly enhance this portion of the work. Apropos of this, it is to be noted that in figuring "a good scalpel," the latter appears with the blade riveted in a slit made in an ebony handle; dressing or dissecting forceps appear with deep serrations upon the handles, and artery clamps or pressure forceps (originality in which, by the way, is credited to Spencer Wells instead of Péan) are shown with the old-fashioned and dangerous screw-joint. While more than one plan is described for purifying sea-sponges, only the barest possible mention is made of the use of gauze as a substitute therefor, as employed by many careful surgeons.

Mr. Treves protests, and very properly, against a multiplicity of instruments, and asserts that this is evidence of lack of dexterity on the part of the inventor in the use of his hands. While this is undoubtedly true in many instances, yet there are certainly many time-saving devices of great value, as, for instance, the hawk's-bill scissors of Skene, which, while not absolutely necessary, yet, by shortening the period covered by an operation, serve the patient's best interests as well as the surgeon's.

Some very useful hints are given under the head of anæsthetics. Several special forms of ether apparatus are figured; the best in use, however, the Allis inhaler, is conspicuous by its absence. If the writer had borne in mind his expressed preference for simplicity he would not have failed to describe the inhaler preferred by many practical surgeons, namely, the one improvised from a common towel and newspaper, materials always at hand or easily obtained in any household. In view of the general preference given by British surgeons for chloroform, it is refreshing to read that "Generally speaking, nitrous oxide is the best anæsthetic for very brief operations, and ether for longer cases." No mention is made of the method of "primary anæsthesia," which occurs for a brief period before the stage of excitement, and during which a patient is sufficiently unconscious for the purposes of a simple incision of an abscess, or other short procedure otherwise painful.

Under the head of "Ligature of Arteries" there is much historical retrospect. Credit is given to American surgery for the introduction of the animal ligature (Physick, of Philadelphia, 1814). Proper means of preparing and sterilizing catgut, however, are not given. Few realize how many deaths are attributable to improperly prepared ligatures, especially those made of catgut. It is manifestly bad judgment for a surgeon to apply a ligature of catgut to a large vessel without knowing just how it has been prepared. It is not asking too much, on behalf of the patient, that, under these circumstances, the surgeon should be familiar with the very best methods in vogue, and that he prepare the catgut with his own hands. This would be directly in line with Mr. Treves' own advice to the effect that the surgeon should personally supervise the "minutest details." Barring the matters just commented upon, the chapter upon artery tying is most excellent from any standpoint.

Turning to the chapters upon special operations, the reviewer finds little to criticize and much to commend. Omissions in the way of failure to notice modern and approved operative procedures are few and far between. The most extensive and careful reading, as well as the exercise of the most judicious discrimination is shown in the selection of material. Some exception might be taken to the routine method of ligaturing the femoral artery in popliteal aneurism, instead of, in certain cases, selecting the upper portion of the popliteal for this purpose (vol. 1, p. 186). The author recommends the intraperitoneal method of ligature of the common iliac artery. This, as well as the internal iliac, is reached through a median abdominal incision. Due credit is given Prof. Dennis, of New York, for his three cases of intra-peritoneal ligature of the internal iliac artery. If, to the concise description of the operation quoted from Prof. Dennis, be added the advice to place the patient in the Trendelenburg position for the purposes of the operation, much valuable time will be saved, and the services of a skilled assistant in keeping the abdominal contents out of the way, dispensed with.

An entire chapter is devoted to Chopart's amputation through the mediotarsal joint, and then the comment is made that "the value of this operation is open to serious question." No surgeon who has been compelled to perform achillorrhaphy or achillotomy for the distressing condition in which the patient finds himself in course of time following the operation, will quarrel with Mr. Treves for his implied proposition to reject this amputation altogether. Certainly it should be reserved for injury cases alone, and even here it may be profitably replaced by subastragaloid amputation, in which the only bone of the foot that is left behind is the astragalus,—or a Syme's amputation. The advantages of the Wladimirow-Mikulicz osteo-plastic resection of the foot is noted, and an account of the operation is taken, with due credit, from an article by Dr. C. Fenger, of Chicago. Preference is shown by Mr. Treves for the long external flap amputation of the leg (Farabeuf's) at the point of election. His experience with it, however, is confined to cases of intractable ulcer at the lower part of the leg, a condition which, since the introduction of Thiersch's method of skin transplantation (which, by the way, is not mentioned in this work) rarely demands resort to so extreme a measure. Amputation in this region, in this country at least, is most often performed for injury to the leg, and in this class of cases the very part from which the flap is to be taken is the most exposed, and hence most frequently the site of laceration, contusion, etc.,—circumstances not calculated to improve the vitality or insure the integrity of a flap, with which some risks must be taken, owing to its large size, under the most advantageous circumstances.

In joint erasion, Mr. Treves asserts that the removal of the diseased synovial membrane, together with gouging out carious bone, is all that is required. In the opinion of many surgeons, this plan does not yield as good results as when the articular cartilages are more or less completely removed. It is true that the method advocated seems quite well for slight cases, but if anchylosis is aimed at, it will be more certainly and permanently attained if the articular cartilage is removed.

Resection, with subsequent immobilization with splints, is preferred to the method of wiring, in ununited fracture, according to Mr. Treves. His experience in the use of the wire suture in cases of this character has evidently been unfortunate, since he denominates it a "delusion and a snare." This applies as well, evidently, to the use of the wire suture in fracture of the patella (in which, by the way, he does not advocate the application of any operative procedure, save as a secondary measure, after it is demonstrated that the union obtained by ordinary methods is insufficient), inasmuch as here he recommends a modification of Malgaigne's hooks, the fragments having been previously exposed and freshened, as in the operation of wiring. The fragments are more accurately coaptated, it is claimed, and the difficulties sometimes met with in the withdrawal of the wire avoided. In addition to this, the surgeon may, by subsequent drawing together of the fragments, should this not have been accomplished at the operation, remedy the defect, as well as note, from time to time, if anything is going wrong as regards the position of the parts.

A chapter upon the removal of the breast, which is a most admirable one, concludes the book.

Taking the work as a whole, it is to be cordially commended as one of the best manuals upon the subject extant. Its production will certainly enhance the reputation of a surgeon who is already favorably known wherever the English language is spoken. While there abound in its pages many special operative methods introduced by Mr. Treves himself, many of which are of great value, yet it is not for these alone for which the work is to be commended, but, in addition, for the careful and judicious selection of the very best from among the almost countless number of different procedures with which surgical literature of the last quarter of a century abounds.

But little fault can be found with the illustrations, and still less with the typography. In the matter of the first named, it is curious to note that in a picture credited to Farabeuf (vol. I., p. 481), which is supposed to represent a mode of cutting the flap from the external side of the leg, either the flap is really being taken from the inside of the leg, or the great toe has been transposed in its relation to the medial line of the body. GEORGE RYERSON FOWLER.

THERAPEUTIC HANDY REFERENCE BOOK FOR PHYSICIANS. Philadelphia, 1892: William R. Warner & Co. Pp. 119.

This handy little volume contains, among other things, aid in memorizing doses, treatment of asphyxia, time of incubation of eruptive fevers, tables of the digestibility of food, hypodermic medication, poisons and antidotes, and tables of weights and measures.

THE HYDRIATIC TREATMENT OF TYPHOID FEVER, according to Brand, Tripier and Bouseret, and Vogl. By Charles Sihler, M.D. Published by Charles Sihler, Cleveland. Pp. 340.

A full statement of the methods of employing baths in the treatment of typhoid, with statistics showing its advantages.

PHYSICAL DIAGNOSIS. By C. A. Gibson, M.D., etc., and William Russell, M.D., etc. With 101 illustrations. New York, 1891: D. Appleton & Co. Pp. 376.

As a convenient and trustworthy guide for medical students, we doubt if there is any better manual in the English language than this. The fact of its having been selected as a guide in some of the most progressive medical schools is a strong recommendation for it, as it is for any book, provided always that the author of the book is not a teacher in the schools. The writers of this work are both men who from personal experience know what a text-book for students should be, and therein have had a great advantage over many authors.

SYPHILIS IN ANCIENT AND MODERN TIMES. By Dr. F. Buret. Translated from the French by A. H. Ohmann-Dumesnil, M.D. In 3 volumes. Philadelphia, 1891: F. A. Davis. Vol. 1, pp. 226. Price, $1.25.

Those who are interested in the history of syphilis will find this work most valuable. The author believes that syphilis is of very ancient origin, even finding evidences of it in prehistoric bones, and existed among the Chinese five thousand years ago. He traces it down to the time of the Pharaohs, and finds it among the ancient Assyrians and Babylonians, 700 B.C. He stamps as ridiculous the attempt to prove that syphilis was born in San Domingo in 1494.

MANUAL OF VENEREAL DISEASES. By E. M. Culver, A.M., M.D., and J. R. Hayden, M.D. With illustrations. Philadelphia, 1891: Lea Bros. & Co. Pp. 294. Price, $1.75.

The authors have succeeded in giving to the profession a book which contains in a condensed form a working knowledge of syphilis, chancroid and gonorrhœa. They have purposely omitted all non-practical subjects such as history and statistics, and have confined themselves to the practical aspect of the subject. For the busy practitioner who desires to keep abreast of the art of medicine such books as these are most valuable.

ESSENTIAL OF MEDICAL ELECTRICITY. By D. D. Stewart, M.D., and E. S. Lauraner, M.D. With 65 illustrations. Philadelphia, 1892: W. B. Saunders. Pp. 158. Price, $1.

The series of Essentials would not be complete without a book on Medical Electricity. The writers of this manual claim no originality, but simply that they have culled from the best books that which they believed would be most valuable to students both in college and out, and have digested it for them, so that all they need do is to assimilate it.

EX ORIENTE: STUDIES OF ORIENTAL LIFE AND THOUGHT. By Edward P. Thwing, M.D., Ph.D. London: S. W. Partridge & Co. Edition de luxe, $2; paper, 50 cents. To be had only of author. Pp. 119.

In this little book Dr. Thwing gives an insight into many of the characteristics of the Eastern nations, derived from a recent tour in India, China and Japan. He has given much attention to Asiatic thought as reflected in language, monumental art, and social life, and as he is a careful observer his deductions cannot but be of value.

INTERNATIONAL MEDICAL MAGAZINE. A monthly devoted to Medical and Surgical Science. Edited by Judson Dalland, M.D. Philadelphia: J. B. Lippincott Co. Price, $4 per year.

The first number of this new monthly appeared in February. The publishers state that there is "need of a monthly journal, whose dignified tone, liberal international spirit, and practical teachings shall clearly reflect the best thought and work of the medical world—a journal which shall enable the busy practitioner to keep abreast with the rapid progress of every department of medicine." To supply this long-felt want is the object of this new journal. It would, perhaps, be considered rather egotistical in us if we should say that it was to supply this very want that the BROOKLYN MEDICAL JOURNAL was established, and that we had hoped that the hunger of the profession for this kind of literature had been appeased thereby; but we are evidently mistaken, and as we believe that the principles enunciated in the announcement of the publishers are the true ones on which to conduct a journal, and especially as we have always acted on them, we can but extend a hearty welcome to this new comer, who becomes, as it were, a foster-brother

THE ACTION OF THE TURKISH BATH IN DISEASE. By Charles H. Shepard, M.D. Reprint from the Journal American Medical Association, October 31, 1891.

Dr. Shepard claims for the Turkish bath that it is a convenient agent for the application of heat to the body, and is readily adapted to the treatment of any diseased condition in which heat is useful. He cites numerous instances of high temperature, 250° F. to 600° F. being borne with impunity. For the troubles incident to childhood the author regards the bath as a panacea, and in his hands has been of great benefit in eruptive fevers and croup. He recommends it for gout, rheumatism and neuralgia, and believes it to be efficacious in the treatment of consumption.

TRANSACTIONS OF THE OPHTHALMOLOGICAL SECTION OF THE AMERICAN MEDICAL ASSOCIATION, AT THE FORTY-SECOND MEETING, HELD AT WASHINGTON, D. C., MAY 5 TO 8, 1891.

These appear in a convenient and well-printed volume of 380 pages, and consist of twenty-four original papers with their subsequent discussions, together with the lists of officers and members and the minutes of the meetings. While the size and appearance of the book are pleasing, the absence of any further title on the cover than "Section on Ophthalmology" certainly deserves criticism, not even the year being given. The inconvenience necessitated by this neglect is not in accord with the modern time-saving spirit. Of the papers presented, five treat of the interesting question of cataract in one or other of its aspects. Very radical views are presented by Dr. Murrell, of Little Rock, who advocates the performance of iridectomies and extractions in one's office, a plan he has followed for two years in all cases (unless the patient or his family object), the patient being sent home in carriage or street car or allowed to walk "a mile or two" with unoperated eye unprotected by any dressing. This, however, by no means voiced the spirit of the Section, and it is doubtful if the doctor would himself be willing to indulge in such open-air exercise immediately after operation, were he the patient. Two papers consider the more accurate numeration of prisms, one favoring the centrad as a unit, the other the prism-dioptry as suggested by Prentice, of New York. As the larger part of the practice of every ophthalmologist is made up of cases which can be best relieved by glass, the five papers on refraction are of decided interest. They contain many suggestions of value; among others, the importance of correcting even slight refractive errors, notably astigmatism. The remaining papers are of a more general nature, and it is impossible in this short notice to give them any special mention. The work of the Section, as well as the form in which it is presented, is commendable, and reflects credit on those who had the matter in charge.

COCAINE POISONING. By J. B. Mattison, M.D. Reprint from Medical and Surgical Reports, October 24, 1891.

This contains an abstract of the cases of cocaine poisoning with conclusions of the author.

ADDRESS TO THE GRADUATES OF THE TRAINING SCHOOL FOR NURSES AT THE LONG ISLAND COLLEGE HOSPITAL. By J. S. Wight, M.D., 1891. Published by the author.

In this address the author encourages and advises the graduating class of 1891, pointing out to them in an interesting and suggestive way their privileges and responsibilities.

A DICTIONARY OF TREATMENT. By William Whitla, M.D., Queen's College, Belfast, etc. Philadelphia, 1892: Lea Brothers.

The above is a unique volume.

The opportunity is seldom given of finding on 900 compactly printed pages so much valuable information. The plan of the work has been to describe the management of disease and the result is most successful. The author has evidently had a vast experience. He treats of matters belonging to the many branches of medicine. The impression is at once given of a personal understanding with his subject. As a rule, books on therapeutics simply are of little value. Many are being printed. Some of these are in the form of annual publications. These are practically useless, as they are repetitions, and frequently give much that is of no value. It is safe, however, to make an exception of the present volume.

There is a graceful and grateful dedication, one long chapter and an index. Each title is printed in large, clear type to the left and above its article, which comes immediately after. The next alphabetical subject follows, and so on until the list of diseases, arranged in this manner, is finished. There are no divisions or classifications of any kind. The style is direct. The discussion is frequently begun in the first sentence. Some of the articles commence with the words "The first thing to do is," or "The first step toward treatment is;" this economizes space. The article on emphysema illustrates this. The author believes what he writes. He is never vague. If he speaks of a remedy he gives the exact dose and the time for administration.

From the work we find that the author has given as much as four drachms of the bicarbonate of potash for immediate relief in cases of great acidity of the stomach. The article on alcoholism has a strong plea for strychnia. In a case of strychnia poisoning the true antidote seemed to be found in alcohol. He believes the drug to be of value in delirium tremens and thinks it relieves the craving for alcohol. Those patients who are suffering from delirium tremens are to be regarded as insane and so to be managed. There is a detailed description of transfusion. Better results are said to come from a saline solution than from human blood. For the treatment of aneurismal tumors on the limbs one of the six methods of treatment given is rapid pressure under an anæsthetic. This would seem to be an excellent plan, under certain circumstances.

Under the heading "Croup" there is a statement which at first sight would seem to be a misprint, but as it is repeated it must express the author's views. It should not pass without a protest, which should be condemnatory in its character. It is advised, in order to produce emesis, to administer *one-eighth of a grain of tartar emetic every fifteen minutes to a child two years old.* A mixture is also given for a child one year old which contains ipecac, squills and tartar emetic. The practice of giving tartar emetic to infants could not but be productive of great harm, for in children antimony is a powerful depressant. The doses given above would certainly cause alarming, if not fatal, symptoms.

Under "Diabetes" eight elaborate diet lists are given, quotations from various writers. Paraldehyde is considered an excellent hypnotic, having no unpleasant after effects. It may be given in one drachm doses in mucilage, brandy, or some aerated water. Sleep follows soon after administration and lasts about six hours. The advocates of the radical and indiscriminate use of saline cathartics in *peritonitis* are advised to read the article on page 607, in which such use is condemned, and their administration called, except in certain exceptional cases, an experiment. Baths and electricity are recommended in rheumatism.

In commending this work it is well to remember that it does not discuss the features of disease ; nor does it treat in any way of the methods in which drugs act. The author has selected a certain title. He has kept his material within proper bounds in a truly marvelous manner, making indeed a very perfect dictionary of treatment. HENRY CONKLING.

A PRACTICAL MANUAL OF DISEASES OF THE SKIN. By George H. Rohé, M.D., assisted by J. Williams Lord, A.B., M.D. No. 13 in the Physicians' and Students' Ready-Reference Series. 12mo. Pp. 303. Extra cloth, price, $1.25, net. Philadelphia: The F. A. Davis Co.

These shorter manuals certainly have a place in dermatological science for the medical student and busy general practitioner, and exactly such a place as is indicated by their relative size, as contrasted with the fuller treatises on the same subjects. The volume under consideration is good as far as it goes.

The absence of plates and illustrations in this volume we look upon as a negative virtue, as they are usually indifferent in works of this size and character and quite as often misleading.

We think the arrangement as to preservation of the orders of classification instead of alphabetical arrangement of the diseases is a good feature, especially for the student for whom it is well that he should think of all the points at issue, so as to be led to the general consideration of the order and nature of the disease, and the particular tissues, etc., affected.

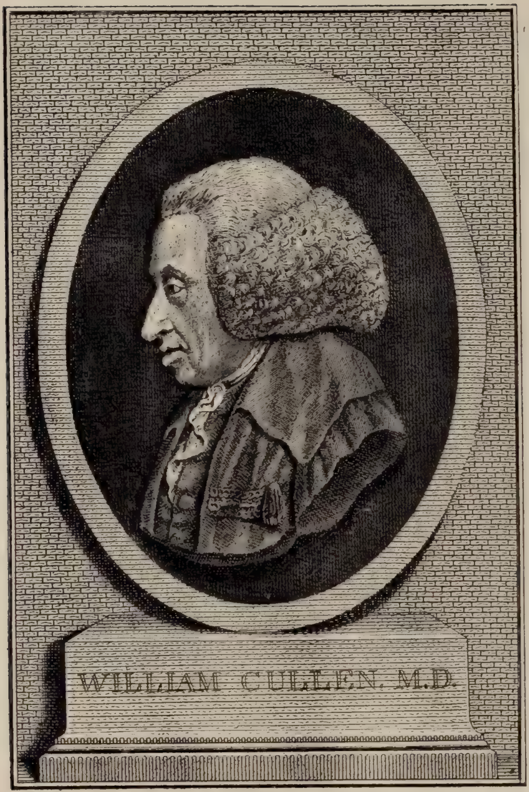
Some criticism might be passed on some portions of the text, as on the description of the lichens, the treatment of hypertrichosis, etc., by electrolysis, in which it is evident the doctor is still an enthusiast, but on the whole the various affections of the skin are discussed, as far as the space goes, intelligently and well, and reflects fairly the consensus of opinion of American dermatologists.

The doctor was for some years a member of the American Dermatological Association, and he will excuse our saying that he ought to re-affiliate.

SAMUEL SHERWELL.

OUTLINES OF ZOOLOGY. By J. Arthur Thomson, M.A., F.R.S.E., Lecturer on Zoology in the School of Medicine, Edinburgh, etc. With 32 full-page illustrations. Pp. 641. New York, 1892: D. Appleton & Co.

An admirably arranged, illustrated and printed book, well adapted to serve as a manual for students of zoology in the lecture-room, museum and laboratory.


WILLIAM CULLEN, M.D.

WILLIAM CULLEN

Was born in 1712, in Lanarkshire, Scotland. After serving an apprenticeship to a surgeon-apothecary in Glasgow, he became surgeon to a merchant vessel, trading between London and the West Indies. He soon, however, returned to his own district and practiced among the rustic inhabitants of the parish of Schotts—a region proverbial even in Scotland for bleakness and poverty. Here he accidentally attracted the favorable notice of the Duke of Argyle, who was visiting in the neighborhood, and by his invitation removed to Hamilton, where he became chief magistrate and was a general practitioner, surrounded by apprentices in his pharmacy, and the trusted physician to the duke.

William Hunter was a native of the same part of the country, and these kindred spirits entered into the singular partnership, which gave each of the young men the opportunity to attend courses of lectures at the metropolitan schools which their poverty denied to them individually. By this partnership it was stipulated that one of them should alternately be allowed to study during the winter at some medical school, while the other should provide the necessary funds by continuing to carry on the business in the country. Cullen took the first turn and passed his winter at Edinburgh. William Hunter chose London for his place of study when his turn arrived, and while there formed that connection with Dr. Douglas which was the foundation of Dr. Hunter's great success and future eminence. Cullen readily relinquished his friend from the partnership, and it so happened that they afterwards had a personal interview. How full of interest would such a meeting have proved to two such individuals, who had parted in poverty and obscurity, and who would have greeted each other again at the head of their respective branches of their profession and in the meridian of fortune and of fame.

Cullen soon became, through the influence of the Duke of Hamilton, professor of chemistry at Glasgow, and by the versatility of his powers, rendered his lectures interesting in a degree which appears, until then, unknown at Glasgow. His medical practice increased, and in 1751 he was appointed by the king to the professorship of medicine. In 1756 he was called to the chair of chemistry in the University of Edinburgh, which city became the scene of his distinction, and from which he finally sent forth admiring pupils to all parts of the world. He soon abandoned chemistry to Black, his former pupil, and succeeded Alston in the chair of therapeutics and materia medica, and afterwards succeeded Rutherford in the chair of practice of medicine.

Cullen may be said to have originated a new doctrine of medicine. From the dictates of Boerhaave no appeal had hitherto been made. "Cullen taught that the human body was a combination of animated organs, regulated by laws, not of inanimate matter, but of life, and superintended by an immaterial principle, acting wisely, but necessarily, for the general health, correcting deviations and supplying deficiencies, not from a knowledge and choice of the means, but through a pre-established relation between the changes produced and the motions required for the restoration of health."

This principle, in its various ramifications, governed every part of his theory of medicine. The action or the torpor of the extreme arteries chiefly influenced the motions which the living principle regulated. His "Physiology" was a little work of much merit and was translated into French, German and Latin. His "First Lines of the Practice of Physic" appeared in 1784, and it has appeared in French, German, Italian and Latin editions. His "Nosology" was indisputably the best system which had yet appeared, which will be readily appreciated on comparison with its predecessors. His "Materia Medica," though a bulky volume, was speedily translated into French, German and Italian. His work on "Water in the Treatment of Fevers," has only in the present decade been thoroughly appreciated and its doctrines generally accepted. It was written nearly a century before its time. Death spared him till he had reached his seventy-seventh year, in 1790.

J. H. H.

MISCELLANEOUS.

REMINISCENCES OF THE EARLY PHYSICIANS OF KINGS COUNTY.

BY H. L. BARTLETT, M.D.

Imagination treads the path
  Of Agamemnon's steel—
Awakes again Achilles' wrath,
  Sees Hector backward reel.
And thro' the cloud that Jove impends
  O'er Greek and Trojan grave,
Lo, Esculapius quick descends,
  To succor and to save!
What power had Alexander's fame
  The fell disease to stay?
What talisman had Cæsar's name
  When Brutus moved to slay?
O lovers of Hippocrates—
  First healer, not the last—
Accept these garnered memories
  Of Galens of the past.

W. L. K.

Whether any of the disciples of Esculapius came to Long Island with the first settlers cannot be definitely settled. It is probable, however, that such was the case, for most of the emigrant ships, and especially those of the Great Dutch West India Company, were supplied with physicians, many of them remaining with the emigrants and taking an active part in the new settlements. Thus Dr. Thomas Wootton was one of the original founders of Jamestown, Virginia, and Dr. Walter Russell was the constant companion of the celebrated Captain Smith of Pocahontas fame; while Dr. Samuel Fuller was surgeon of the "Mayflower," and lost his life in 1633, while ministering to the sick of Plymouth; and Dr. Hermann Mynderts Van de Bogaerdet was surgeon of the Dutch ship "Endragh," in 1631; and Dr. William Deeping was surgeon of the ship "William," of London, in 1633, and both settled in the New World; and surgeons Gerritt Schult and Hans Kierestede came to New Amsterdam with Director Kieft in 1636, where they remained and practiced the healing art, the latter marrying the daughter of Annetje Jansen, a noted midwife of New Amsterdam; and Johannes La Montague, a learned Huguenot physician, and Dr. Adrian Van Der Donck, were both members of Kieft's Council and practiced in New Amsterdam during Dutch rule.

In addition to the regularly educated physician there were in those early days what were called "Comforters of the Sick;" men who were neither skilled physicians nor ordained clergymen, but who performed many of the duties of both, and were a sort of medical missionary, and were supported by public contributions. In fact not a few of the Dutch dominies were also doctors in medicine, and practiced while they preached, if they did not practice what they preached, and sometimes the offices of schoolmaster and physician were combined.

Thus the Rev. Samuel Megapolensis, one of the first Dutch dominies of New Amsterdam was also an M.D., and engaged largely in the practice of medicine. Dominie Rubel, of Flatbush, also, after being deposed from his sacred office on account of drunkenness and other irregularities, took to doctoring, and advertised quite extensively through the papers of the period, as will be seen by the following:

"It has pleased Almighty God to give me wisdom to find out the Golden Mother Tincture, and such a Universal Pill as will cure most diseases. I have studied European Physicians in four different languages. I don't take much money, as I want no more than a small living, whereunto God will give me His blessing.

"Johannes Casparus Rubel,
"Flatbush, L. Island,
"March 23, 1788."

In other cases physicians, in connection with their professional duties, filled important civil positions. Thus John Winthrop, the first Governor of Massachusetts, was a practicing physician, and did noble duty for the old Bay State, while the name of Benjamin Franklin will be gratefully and reverently remembered as long as the gleam of the lightning continues to illumine Columbia's skies; and the fame of General Joseph Warren, M.D., will thunder along the ages until the last battle for freedom has been fought, and while the great Magna Charta of our civil and religious liberty is loved and respected, so long will the names of Josiah Bartlett, Benjamin Rush, Matthew Thornton, Oliver Wolcott and Lyman Hall be gratefully remembered. Dr. Bartlett, in addition to being one of the signers of the Declaration of Independence, was also first Governor of New Hampshire and Justice of the Supreme Court of that State.

Besides all these there were also midwives who were allowed by law to have the care of women, and one of the first, if not the first, execution in this country was that of Doctress Margaret Jones —in the Bay Colony—who was charged with being a witch and in league with the devil.

From this it is probable that there were physicians in Kings County—or at least those who practiced the healing art—at an early date, though no authentic history of them can be found.

It is to be presumed, however, that in those early days, when men lived in the simplicity of nature, they did not often require the interference of art, and for the little ailments of the women and children there was in nearly every Dutch dwelling an aged female slave, who had a sovereign remedy for every ill that child and female flesh are heir to and who was always consulted on great occasions. Under the old régime this sable priestess exercised almost despotic sway not only in the kitchen, but throughout the household! It is said that ignorance and superstition are twin sisters, and no class better demonstrates this truth than the negro slaves. They are naturally mobile and given to religious fervor; easily affected by any unusual phenomena and susceptible to any animal excitement. These old hags, especially, were full of superstitions, and saw an omen in everything that happened. Besides, most of them had been in the family for years, very likely had nursed the "Missus" from the cradle, and had instilled into her youthful mind a veneration for her supposed superior judgment and greater knowledge of the preternatural.

It must be remembered that those were times fraught with danger and excitement, when unusual calamities were liable to overtake the widely separated inhabitants and involve them and their dwelling in one common ruin; to foretell which and guard against them omens and portents were eagerly sought for, especially by the slaves; and the appearance of the heavenly bodies, the flight of birds, the movements of the domestic animals, and all mysterious sounds or supernatural apparitions, were carefully noted and discussed with an earnestness and zeal never known or felt outside of these sable disputants and listeners, as they nightly gathered around the wide-mouthed chimney with its blazing fire, in the low-roofed, dingy old Dutch kitchens!

Here also gathered the white children, and with eager ear drank in and imperceptibly imbibed these superstitious notions, which clung to them and influenced them, more or less, despite their better knowledge, or their matured judgment and convictions, in after years.

The influence that one strong, sincere, though ignorant and misguided person has over the feelings and actions of another, however intelligent, gentle and refined, even in opposition to the judgment of the latter, is one of the unexplained mysteries of the human mind!

If, then, in our day the most bare-faced and ignorant pretenders have their followers and patrons among the best educated and most refined, is it to be wondered at that in a less enlightened age confidence was placed in these sincere and honest, though ignorant, slaves, especially in a time when skilled physicians could not be obtained? Whatever the explanation the fact is undoubted that for the most part they were consulted and their advice followed in case of sickness in the olden time.

The first doctor spoken of by the "oldest inhabitant," is Dr. Beck, of Flatbush, though the house now occupied by Dr. J. L. Zabriskie was purchased by his great-grandfather of a Dr. Narberry; but whether he lived in Flatbush is not known. Dr. Beck was an army surgeon and a man of considerable ability. He was probably an Englishman, and surgeon in the British army, though this is not positively known. At all events he was left in Flatbush after the War of Independence, and had a successful practice in this and the neighboring towns until he met with an unfortunate accident which disabled him from active life. His habits even previous to this are said not to have been of the best, and it is intimated that his injuries were received in consequence of his being intoxicated. He soon became poor and was, for several years before his death, supported by charity. Even his death was mysterious and tragical. One evening he went out in the village of Flatbush to take his usual walk and did not return at his accustomed time. Search was at once made for him, and his lifeless body was found in an old well which then stood on the sidewalk, nearly in front of the old Wyckoff house in East Broadway. Whether he threw himself in during a fit of despondency or fell in accidentally no one ever knew. The only relic left of him, so far as we know, is the silver head of an old cane once used by the doctor, and now in the possession of Mr. Peter I. Neefus, of Flatbush.

About this time two brothers by the name of Van Buren practiced in Flatbush and the surrounding towns. Dr. James Van Buren lived in the old Duryea house, now owned by the Brooklyn Railway Company. Dr. John was a single man and boarded most of the time with another brother who kept a public house near the old jail. Little is known of either of these gentlemen. They were succeeded by Dr. Nicholas Schoonmaker, son of the old dominie, and Dr. William D. Creed.

Dr. Schoonmaker resided in an old house, which was torn down some years since to give place to the handsome mansion of Mr. Henry Lyles, Jr. He is spoken of as a man of ability and a successful practitioner, though he died under very peculiar circumstances before he had lived to achieve great eminence. He was making some repairs to his dwelling, and was superintending the digging of a cellar under one portion of his house. While witnessing the excavation he perceived a very offensive odor which produced almost instantaneous sickness, from which he soon died. What is still more remarkable, his little son, whom the doctor held in his arms at the time, also died of the same disease.

Dr. Creed was born in Jamaica and practiced for some years in Brooklyn. While residing there he was made sheriff of the county, and, in a measure, gave up his profession. At the expiration of his term of office he went to New Utrecht to live, and pursued his professional career in the county towns for some time, and finally retired to the place of his birth, where he died some few years since.

At Dr. Schoonmaker's death Dr. Adrian Vanderveer purchased his late residence and commenced his professional career. Dr. Vanderveer was born in Flatbush in 1796, received his preliminary education at Erasmus Hall, received his diploma at Columbia College in 1816, and graduated in medicine at the College of Physicians and Surgeons about 1820, and immediately began the practice of medicine in his native town. His practice at first was of a general character and extended over most of the county. About the year 1838, however, he began to turn his attention more particularly to a specific class of diseases, and he gave up general practice.

Dr. Vanderveer and the late Dr. Sabine, of New York, were contemporaries and pioneers in this department of medicine, in this country, and though at the time they met the opposition of some members of the faculty, still, time and experience have vindicated the truths they taught. If the number of one's patients is a criterion of success Dr. Vanderveer was eminently successful, for patients flocked to him from every state in the Union! In fact, he was killed by overwork. In 1850, when in the full tide of a successful career, he was stricken down with paralysis, from the effects of which he died ten years later.

Dr. Vanderveer was a man of marked individuality, possessed great force and determination of character, and was thoroughly educated in his profession and conscientious in the discharge of his duty. He was the originator of the Flatbush Sunday-school, and was its superintendent for many years.

About the year 1830 Dr. John V. Zabriskie married a Flatbush lady and came here to reside. He was born near Albany, on the Hudson, and was the son of the Rev. John L. Zabriskie, a well-known divine. He was a graduate of Union College and received his degree of Doctor of Medicine at the University Medical College, Philadelphia. He was a colleague of Dr. Vanderveer until 1848, when he died of typhoid fever contracted in the discharge of his professional duties.

Dr. Zabriskie was a cultivated gentleman. He was not only devoted to the work of his life—the cure of the sick—but he was passionately fond of music, poetry and the fine arts. He was much interested in photography, and took pictures by the aid of the camera long before it came into general use. He also experimented largely with electricity and galvanism, and left behind him plaster-of-Paris casts of groups and medallions which would do credit to professionals in that line. However unlike Drs. Vanderveer and Zabriskie might have been in some things they were similar in their love of nature, and both were devoted to the culture of trees and flowers, and both left behind them many warm admirers and loving friends.

As before remarked the physicians of Flatbush did all the business of the county in its early periods, if not until after the War of Independence. In fact, as late as 1808 there were only three physicians in Brooklyn.

Dr. William G. Hunt, a navy surgeon, settled in Brooklyn just after the Revolution, and resided many years at the corner of Congress and Fulton Streets. He was a well educated though rather brusque little man, and did most of the surgery and attended the families connected with the government offices and navy yard.

About the same time Dr. Charles Ball opened an office at the corner of Sands Street and Fulton, and in a short time he was joined by Dr. Matthew Wendell, and they were in partnership many years, though Dr. Wendell had the largest practice of the three. These men were followed by Drs. Cussman, Rapalyea, Marvin, Mason, Ostrander, Garretson and Hurd. So recently has Brooklyn become a city that some of these men are still living and in the active duties of their calling.

In 1805 Dr. Francis Henry Dubois came to New Utrecht to settle. His practice here soon became large and so continued until the time of his death in 1834. He was buried in the quiet graveyard in New Utrecht and the inscription on the tombstone is as follows:

"The servant of the public, and the friend of the poor for more than thirty years, he closed a laborious and useful life by a peaceful and happy death."

This was the loving tribute of his son, James English Dubois, who was now to take his place, and who in after years was to yield his life, as dies the soldier on the field of carnage, at the post of honor and in the discharge of duty. Dr. James Dubois had practiced with his father two years previous to his death and now found himself alone in an extensive field. In fact he had so much to do that he was obliged to get assistance, which he did in 1848, Dr. Berier becoming his partner, and so continuing for two years, when he retired on account of ill health, and in 1850 Dr. John Ludlow Crane took his place. This partnership continued until September, 1856, and was then only dissolved by death, for they died within a few hours of each other of yellow fever, which they had contracted in attending patients along the Bay Ridge shore during the summer and fall of that year. If ever two men sacrificed their lives for the sake of others these two did, and what did a grateful public do? Exclaimed, "Poor fellows!" erected a cheap monument over their graves and left the care of their families to the tender mercies of others and a kind Providence!

Dr. John Carpenter also practiced in New Utrecht, at least for a time, though he commenced his professional career as an army surgeon. Being possessed of some wealth he did not, especially in his declining years, devote all his time to the care of the sick, but left his home in New Utrecht during the winter months and boarded in the city. He was more particularly interested in the well-being and education of the young, and was for many years the superintendent of the Sunday-school and for two or three terms filled the office of school commissioner of the county. He was a man highly respected in the community and died beloved and revered by a large number of friends.

I have thought it not inappropriate to give in this connection a brief sketch of the deceased physicians of the county buildings, situated at Flatbush.

The county farm was purchased in 1830, but the almshouse was not erected upon it until 1832, when the Asiatic cholera in a malignant form was raging in the city of Brooklyn and made it incumbent upon the authorities to provide more ample accommodations for the sick. Dr. King, of Brooklyn, was placed in charge of it and so continued for two or three years. He then resigned and engaged in private practice in Brooklyn, I presume, until the time of his death. Dr. Zabriskie, before referred to, succeeded him, and Dr. Wade became his assistant. Of him I know nothing more than that after his connection with the almshouse ceased he removed to Brooklyn, where he died only a few years since, leaving a memory beloved and respected. He was succeeded by Dr. Green, who died at his post in a few months, of typhus fever. At his death Dr. D. Tilden Brown became resident physician and so continued until 1852, when he resigned to take charge of Bloomingdale

Asylum, and Dr. Thomas Turner, who had been his assistant for two years, was named in his place.

Whatever may be said of the management of the Charity Commissioners they certainly have done themselves credit by the men they have placed at the head of the medical departments under their care, and among them all no one is remembered with more love and respect than Dr. Turner. This is neither the time nor place to enter into an extended notice of his character and professional worth. This has already been ably and fully done by his friend and successor, the late lamented Dr. Stiles. Suffice it to say that it has never been our fortune to meet a more conscientious, painstaking physician. His most distinguishing characteristic was his unselfish devotion to the welfare of those under his professional care, and in their service he sacrificed his life, dying of pulmonary consumption seven months after leaving the hospital.

Of Dr. Stiles it is still less necessary that we should speak in detail. His death is so recent and recollection of him so fresh that there is no need of an extended notice of him here. His friend, Dr. Thayer, however, has recently paid his memory a graceful and glowing tribute. There is one name more among the honored dead of whom I would like to speak ere we close. A man who possessed rare accomplishments, though not appreciated, and who performed more unrequited labor than any other physician in the country. We refer to Dr. Charles E. Isaacs, who was consulting surgeon to the Kings County Hospital from 1859 to 1860. His career was varied and remarkable. Although he was naturally possessed of a brilliant mind, which had been carefully cultivated by reading and study and enriched by foreign travel, still he was so modest and retiring withal, and his manner was so unprepossessing, especially to laymen, that until he came to the city of Brooklyn to reside he had never had a remunerative practice. For many years he was demonstrator of anatomy in the old College of Physicians and Surgeons, and was the pet and admiration of all the students. He was an encyclopædia of anatomical knowledge and a physiological embodiment of pathologic lore. He was appointed consulting surgeon to the Kings County Hospital at the urgent request of Dr. Turner, who greatly admired him, and so continued until the time of his death. His anatomical knowledge made him a bold and confident surgeon, while his sympathetic heart and conscientious regard for his patients' welfare prevented him from needlessly or rashly sacrificing life or limb. Had he lived his career in this city would doubtless have been brilliant as it deserved, but alas! he died ere we hardly knew him.

Much might be said of the personal experience of these men, of their self-denying labors by night and by day, amid summer's heat and winter's cold, in palatial residences and in the hovels of the poor; now comforting the sorrowing and ministering to the relief of those whose ebbing life was fast receding beyond human aid, and now tenderly and delicately ushering a new-born life into existence to be enshrined in joyous and loving hearts.

It is but just to add that as a class they have been the hardest worked and poorest paid of all the professions, and that most of them have died martyrs to their calling.

THERAPEUTIC NOTES.

Treatment of Boils.—Dr. Craig, in the *Reporter*, recommends the following treatment for boils:

℞ Tinct. ferri chlor	gtt. xv
Liquor potassii arsenitis	gtt. iii
Aquæ	f ʒ ss

Take at a dose after each meal.

Use locally, carbolized camphor, and a poultice when there is much inflammation. Also give small doses of Epsom salts to prevent constipation.

Rhus Poisoning.—A lotion of three drachms of powdered ipecac in a pint of water is recommended very highly by Dr. W. S. Gilmore, in the *Country Doctor*, as an application in the dermatitis caused by poison-ivy. The free dusting of aristol on the vesicles is said to give immediate relief.

Vinegar for Urticaria.—After trying many remedies in a severe case of urticaria, Mr. Swain found a vinegar lotion gave almost instant relief, and subsequent trials in other cases have been equally successful. One part of water to two parts of vinegar is the strength most suitable.—*British Medical Journal*,

A Disordered Condition of the Primæ Viæ.—Dr. J. M. Hays, of Oxford, N. C., uses the following for a furred tongue—large and flabby, with a bluish cast—anorexia, constipation, perhaps alternating with diarrhœa, slight headache, general lassitude, sleeplessness, loss of interest in business and pleasure:

℞ Podophyllin	gr. x.
Tinct. nux. vom	℥ j.

M. Sig.: Shake and take from five to eight drops in a little water before each meal.

Antipyrin as a Hæmostatic. — Antipyrin dissolved in its own weight of water is said to be an efficient hæmostatic.

Menthol in Pruritus.—"Menthol has been found useful in the summer irritations of the skin, including those following the bites of mosquitoes, fleas, and other insects. One part of menthol added to eight or ten parts of alcohol, or cologne water, will relieve not a few persons, but not all; at all events it is a pleasant soothing and cooling application. Some forms of headache, or brow-ache, are speedily relieved by the lotion containing one part in ten of menthol, the same being applied by rubbing, over the forehead and temples, with the hand or dampened muslin. Mixtures of menthol in glycerine and water have been commended for like purposes, but are not so suitable as the lotion above mentioned for use about the face, head and hands."

Black Eye.—There is nothing to compare with a tincture or a strong infusion of capsicum annuum, mixed with an equal bulk of mucilage or gum arabic, and with the addition of a few drops of glycerine. This should be painted all over the bruised surface with a camel's hair pencil, and allowed to dry on, a second or third coating being applied as soon as the first is dry. If done as soon as the injury is inflicted, the treatment will invariably prevent the blackening of the bruised tissue. The same remedy has no equal in rheumatic, sore or stiff neck.—*Medical Times.*

NEW CHAIRS AND PROFESSORS AT THE JEFFERSON MEDICAL COLLEGE.

The Board of Trustees of the Jefferson Medical College at their meeting, April 7, 1892, instituted a chair of Clinical Gynæcology, with a seat in the Faculty, and elected to the new chair Dr. E. E. Montgomery, who has been for a number of years professor of gynæcology in the Medico-Chirurgical College. They also established the following Clinical Professorships, electing Dr. F. X. Dercum, Professor of Nervous Diseases; Dr. E. E. Graham, Professor of Children's Diseases; Dr. H. Augustus Wilson, Professor of Orthopædic Surgery; Dr. H. W. Stewagon, Professor of Dermatology, and Dr. W. M. L. Coplin, Adjunct Professor of Hygiene.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

The second annual meeting of the American Electro-Therapeutic Association will be held in New York, October 4, 5, and 6, 1892, at the New York Academy of Medicine, 17 West 43d Street. H. M. Bigelow, M.D., Secretary.

JOHN FREIND. M:D.

"A deep philosopher, a learned physician, an elegant writer, and an ornament to society; honest and humane, ever desirous of doing good, and of communicating knowledge to the extent of his power." What higher eulogy could a man have than this one given the subject of our sketch by one of his contemporaries.

Freind was the son of an English clergyman, and first saw the light in Northamptonshire, in 1675. He was educated at Westminster, and afterwards at Christ Church, Oxford, where he was early distinguished for his attainments as a classical scholar, publishing during his pupilage there, Latin translations with notes of several of the Greek classics. He took the degree of A. B. in 1698, and from that time applied himself sedulously to the study of physic, and received the degree of bachelor of medicine in 1703, having taken his A. M. in 1701. Previous to receiving his medical degree, he had brought out several valuable papers on medical topics which were published in the Philosophical Transactions of that period. In 1703 he published his "Emmenelogia, in qua Fluxus Muliebris Menstrui Phænomena, Periodi Vitia cum Medendi Methodo," etc. This work, though at first severely criticised by several writers, has always been regarded as an excellent performance. It is, says one authority, "admirable for the beauty of its style, the elegant disposition of its parts, its wonderful succintness and perspicuity, and for the happy concurrence of learning and penetration through the whole."

In 1705 he became lecturer on chemistry at Oxford, which he gave up the following year to enter the army, and continued abroad until 1713, when he returned and settled in London. In 1707 he had been created M.D. at Oxford; and in 1712 he had been admitted a F. R. S. In 1716 he was admitted a fellow of the College of Physicians, and continued to attend to the cares of his profession, writing and publishing several books and pamphlets, often of a controversial or satirical nature; until in 1732 he was elected to parliament and distinguished himself by some able speeches in the House of Commons against measures of which he disapproved.

He was a staunch Tory, and attended his friend Bishop Atterburry in the Tower as his physician, and was suspected of being concerned in the so-called bishop's plot, and was himself committed to that prison and confined for some time; when, owing to the efforts of Dr. Mead, who refused to prescribe for Sir Robert Walpole, the minister of the day, until he was liberated, Freind was admitted to bail.

It was during the period of his confinement that he laid the plan of his last elaborate and most learned work: "The History of Physic from the time of Galen to the beginning of the Sixteenth Century."

Soon after his liberation he was appointed physician to the Prince of Wales; and on the prince's accession to the throne he became physician to Queen Caroline.

Dr. Freind died in 1728, and a monument with a eulogistic inscription was erected to his memory in Westminster Abbey.

Freind was somewhat convivial in his habits, and apt to be somewhat mellow after dinner, and once made a professional visit to one of his patrons in this state; but the family not choosing to trust to his prescription, sent for Dr. Mead, who came, and after looking at what Freind had written, remarked: "'Pon my word, if Dr. Freind wrote this when he was drunk, he prescribes better than I do when sober." At another time it is related that he came to the bedside of a lady of high rank in such a state of confusion that he could only grumble to himself, "Drunk—drunk—drunk, by G—d." Fortunately for Freind, the patient was suffering from the same malady as her doctor, who had made the above bluff comment on her case and had then gone away. Next day as Freind was sitting in a penitential state over his tea debating what apology he should make to his aristocratic patient, he was relieved from his perplexity by the arrival of a note from the lady herself, inclosing a handsome fee, imploring her dear Dr. Freind to keep her secret, and begging him to visit her during the day.

The following lines are from the pen of Samuel Wesley :

When Radcliffe fell, afflicted Physic cried,
"How vain my powers!" and languished at his side.
When Friend expired, deep struck, her hair she tore,
And, speechless, fainted, and revived no more.
Her flowing grief no further could extend;

THE

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ORIGINAL ARTICLES.

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THE MANNER OF DEATH IN PNEUMONIA.

BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital.

Read before the Medical Society of the County of Kings, April 19, 1892.

Some disturbance of activity in one of the three organs having directly to do with the vital processes—the heart, the lungs, the brain—is always present in cases of disease in which the termination is death. Such disturbance interrupts the harmonious relation that exists between the organs of the body, and is in itself the immediate and the secondary cause of death, to which depending upon the special organ certain scientific names have been given.

While it cannot be denied that in long-continued disease the heart is apt to become exhausted and neurasthenic conditions are common, yet it must be emphasized, that in order to obtain such a condition *long continuance, suppuration or auto-infection* must be present. For the strength of the heart is so great; its muscular fibres of seven layers so tenacious; its powers of nutrition so perfect; its vascular supply through coronary arteries, with wide open mouths, so full; its nerve supply so complete, that there is always reserve force, and the relation of its own action to that of the elastic recoil of the aorta so harmonious, that in many diseases of a grave character the heart can maintain its action throughout without stimulation of a marked degree. So that when death comes in the early part of any disease, always excepting the condition of suppuration and auto-infection, its ætiological factor must be searched for somewhere else than in weakness of the heart walls.

My own attention was drawn to this subject some time ago in a case of lobar pneumonia, where the patient was seemingly in a good condition. He suddenly died. A post-mortem examination could not be obtained, but the question kept repeating itself: Why did the man die? Similar cases of an almost identical character occurred not long after, and with them was commenced the study of a certain interesting condition, the results of which are presented in this paper. They deal more directly with the mechanical part which the heart plays in death in lobar pneumonia, and consist in a clinical study of the disease and in an analysis of thirty-two post-mortem examinations.

From these cases it has been shown that disturbance of the heart's action was due to two causes, both being directly due to the diseased lung. *By the increase in the size of the lung*, *by the diminution of the pleural cavity*, *and by the stationary condition of the diseased organ* are brought together three factors which make the first cause provocative of disturbance in the heart's action. This consists in *want of working room*, and to some degree is present in all cases, producing fatal results in the more severe cases.

The heart, to act well, must have a freely open pericardial sac and an even condition of the tissues and vessels at its base. If changes occur in either of these places suddenly, the effect is disastrous, if slowly the heart may act in its new position. This was shown in a post-mortem examination made in November, 1891, of a case of pulmonary tuberculosis. In the right lung was a large amount of fibroid material, the traction of which, coming slowly, had moved the heart so that it lay almost transverse across the chest. So gradual had been the change that no murmurs had been heard in the vessels leading from the ventricles.

In diagnosing the cramped position of the heart in pneumonia, the first methods of physical examination give but little aid except in their chests. Auscultation gives a confusion of the sounds. The sphygmograph has given the best results. The pulse is that of irritation, and so delicate has been the work of the needle that frequently a prognosis has been ventured on the tracing.

A limited pneumonia in one lung is not apt to interfere to any great degree with the heart's working room. A pneumonia from apex to base, or a double basic pneumonia does so. While a pneumonia with a pleuritic effusion does so most markedly. This was illustrated in a post-mortem examination made in November, 1889. There were found collapse of the left upper lobe, congestion of the left lower, pneumonic consolidation of the right lower lobe, with a weight for the lung of forty-five ounces; the heart was well to the left, its apex and the ventricular wall touching the chest wall; the contents of the left thoracic cavity were drawn to one side; sixteen ounces of fluid was in the right cavity. There was aortic stenosis, with great thickening of the aortic cusps, but in vegetations. There was no danger of embolism therefore. The presence of the hypertrophied heart was most important, for it gave conclusive evidence that there was no heart weakness. For in adult life where there is no existence of active rheumatic fever, the heart of aortic stenosis is symbolical of strength, so much so that in many cases the secret of its treatment is in cardiac depression and not in using cardiac stimulants or tonics.

This case may serve as an illustration for the manner of death where there is cramped position of the heart. It is easy to see how this patient died. In the early part of the disease the left lung had doubtless pulled the heart. As consolidation and effusion increased it was pushed as well, until it was in a position where, on the left side it could go no further, while on the right the steadily increasing pressure was folding the pericardial sac around it. In such a cramped position the normal rotatory movement could not take place, and after vainly struggling the ventricular walls suddenly ceased acting, the cause of which cessation was purely mechanical.

The second way in which disturbance of the heart's action may lead to death in pneumonia is from an *ante-mortem heart-clot.* Its action is also mechanical, but is twofold in its nature, sometimes acting directly on the heart, sometimes producing changes in the lungs. In making post-mortem examinations it is common to find in the ventricular cavities masses of dark blood. Sometimes there will be spots of discoloration in the centre or at the edges of these masses. In the cases being analyzed all such conditions have been excluded, and only those considered in which there has been an absence of venous blood as a portion of the interior parts of the clot. This has been considered as a new growth—a solid formation. The blood of pneumonia is the blood of an inflamed state, an excess of fibrin is a feature. Any uneven surface may serve for a clinging point for the deposit. Action in any part of the circulation where an interruption to the flow may occur, by which friction may be brought on the current will favor a deposit, which from a small size may grow to great dimensions. All of these favorable conditions are found in the heart. An ante-mortem heart-clot after being removed from its attachments will present a surface smooth or slightly roughened depending upon the part of the heart to which it has been clinging. It was found to be firm throughout, with a superficial layer that was slightly spongy. It is of an écru color, the outer part being of a light brown. It is firm and can be cut with the knife. In its more internal parts it has a shiny aspect and I think it here can be likened to the lighter parts of a lipomatous sarcoma, the only difference being that the malignant growth has a more jellified appearance.

Its various parts are tenacious so that the entire weight of the heart can be suspended upon it. The clot may fill up the heart cavities; the walls may be closed around it, or it, with non-coagulated blood may be found in the right or left heart. In one case there was found an ante-mortem heart-clot in the right heart, extending through to the right auricle. Its primary attachment was to the muscular wall, back of the posterior segment, and to a few strands of the chordæ tendineæ. It was some three inches in length, firm and tough. It had produced by pressure a temporary tricuspid regurgitation. Upon inspection, the left under surface of the heart was a little convex, due in part to the pressure from the right side. Imperfect working room from position had resulted. In a case of double pneumonia there was a long ante-mortem heart-clot floating out into the aorta and another into the pulmonary artery. In the left ventricle the clot was firmly attached to the anterior mitral valve, a portion to its lower end and the rest to the chordæ tendineæ. Pulling on this through the aorta showed that at the ostium the clot was thinnest. Only a little incompetence had existed. On the right side a clot curved around the ventricular wall from apex up to base, making two clots low down and by their union one high up. They were entangled in the chordæ tendineæ. In another case there extended from the extreme apex of the right ventricle up through the ostium out for four inches into the pulmonary circulation an ante-mortem heart-clot. The broadest part was at the ostium. It tapered to a point at either end. It was firmly attached to all three of the valves. These were normal in color, and the tendinous chords and papillary muscles were firm. A similar clot occupied a similar position in the left heart, not extending as far, nor having as firm an attachment to the valves. These clots were strongly adherent to the heart muscle, but were floating free in both of the arteries.

The parts of the heart to which the clot may be attached are the muscular walls, the chordæ tendineæ, the mitral and the tricuspid valves. In no case was there attachment to either aortic or pulmonary cusps. There were seldom attachments to any part of the auricles. The depressions over the surface of the heart by causing some unevenness no doubt make clinging room for the clot. In the post-mortem book the terms "entangled in," or "twisted around" the chordæ tendineæ are used. These attachments are frequently of a very firm character.

Cardiac lesions, similar to those of inflammatory valvular disease are produced by the clot. These are aortic and pulmonary stenosis, mitral and tricuspid regurgitation and stenosis. There is probably never a double lesion at either the aortic or pulmonary ostii. Regurgitation does not occur at these points. This can be readily explained. The smoothness of the aortic and pulmonary cusps give no clinging point for the clot. The portions that float by them are generally long narrow pieces having an attachment lower down. These pieces float out into the great vessels, and when the recoil comes the valves close around the new material and with it as a centre the closure is perfect. Stenosis at either of these points comes from a diminution in the size of the ostium by the clot, which goes out from the ventricles. Stenosis at the mitral and tricuspid ostii comes from a like diminution produced by portions of the clot going backward from the ventricles. There may be a stenosis without regurgitation here, as the valves may fold around the clot. Regurgitation at these points comes from the valves not closing.

The post-mortem examinations which have been made relating to this matter are thirty-two in number, which may be divided into two series. First, eighteen cases of pneumonia, in fifteen of which the clot was found, and six cases of similar diseases, as, for instance, inflammation of fibro or fibro-serous membranes, in which there was a clot. Second, eight cases presenting a valuable comparison of pulmonary congestion, an inflammatory condition in which there was no clot. In the first twenty-one cases the clot was present eight times in the right heart; eight times in the left heart; five times in both hearts. This makes a total, therefore, of twenty-six clots. The attachments were often multiple, the most important were as follows :

To the anterior mitral segment three times.
" " posterior " " twice.
" " chordæ tendineæ three times.
" " muscular wall thirteen times.
" " tricuspid segments twice.
" " mitral " once.
" " anterior tricuspid segment once.
" " posterior " " once.

The simulated conditions of stenosis at the pulmonary and aortic ostii, by which a portion of the blood is presented from progressing onward, and very materially in tending to increase the size of the clot. The effects produced on the lungs depend somewhat on which heart has the clot. They are in the nature of atelectasis and congestion. A regurgitation causes pulmonary congestion. The stenosis at the pulmonary orifice would account for atelectasis without blood. For atelectasis and congestion the pulmonary condition itself must answer. In the left clot cases the non-pneumonic portions of the lungs were found collapsed once; congested twice; congestion and collapse twice; in the right clot cases there was atelectasis twice; congestion twice: atelectasis and congestion four times: in the double clot cases, atelectasis twice; atelectasis and congestion three times.

One of the most important features of these ante-mortem heart-clots cases is *hepatic congestion, using that term merely to express a venous fulness in the vessels.* There is a direct relation between the clot and the hepatic congestion. This is proved by the figures of the examinations. There was one very remarkable case in the second list of the first series. A huge ante-mortem right heart-clot had produced marked tricuspid regurgitation. The entire venous circulation from the right auricle down had been overloaded and had relieved itself by a hæmorrhage into the stomach of twenty-four ounces weight. Of the twenty-one cases of heart-clot given, the hepatic congestion was present in five cases of left clot and five cases of right clot, being sixty-two-and-a-half per cent. of the cases; in two cases where there was a double clot, or forty per cent. It was found, therefore, in twelve out of twenty-one cases, or fifty-seven per cent. In the eight cases of pulmonary congestion in which there was no clot, hepatic congestion was present in one case, or twelve-and-a-half per cent. A seeming break in the sequence of events appears to be present in the existence of hepatic congestion in the same number of cases in left and right clot. This can be easily explained. The hepatic congestion coming from a clot causing tricuspid regurgitation must have a clot of large size. The three cases of right clot having no hepatic congestion had a small clot. Again, the effects of left clot are more far-reaching. The excess of blood from the left clot in a pulmonary circulation, already limited by disease in its carrying power, finds relief in the backward processes, and the right heart immediately suffers from an overdistention, and so relieves itself by venous fulness. Atelectasis was present in two cases of the eight of pulmonary congestion.

From these cases of pulmonary congestion in which there was no heart-clot may be learned two lessons. First, that the ante-mortem heart-clot comes in the second stage of lobar pneumonia days before death; second, that it is an ante-mortem reality and not a post-mortem fancy, so real that it produces important changes in the circulation of the liver.

The size obtained by the clot was sufficient in some cases to cause the normal concave surface on the under side of the heart as it lies in its sac to become convex. A twisted condition of the fibres was occasionally noticed. Frequently the cardiac veins were abnormally full. Death may come from a sudden congestion of the lungs from a left clot, or by having the blood supply to the lungs cut off by a long clot floating out into the pulmonary circulation, but it is in the action of the cavities themselves that the results of the clot are best studied.

Valuable aid as to its formation can be obtained from cardiac conditions in which there are heart murmurs. In mitral disease of a regurgitant type, I have frequently found a murmur in the aortic region where there was only one, the mitral lesion. This I have attempted to explain by the action of columns of blood. The aortic and mitral openings, while not perfectly so, may yet be considered as being in the same plane, side by side, with a small amount of tissue between them. The first portion of blood coming from the auricle goes at once to the apex of the cavity, and comes around to the aortic opening, making a flattened circle. The next portion of blood does not go so far down, and so on in successive layers until the last blood makes a short curve from the mitral opening to the aorta, causing by the eddies in its current the above mentioned murmur. So in lobar pneumonia, this first blood may make a deposit at the apex of the ventricle. This will be stationary and will increase in size passively, while if the commencement be at the valves or in the cords, the clot will be in motion and will increase by its friction against the blood current. This will be an active increase. The ventricular walls contract, but the clot is permanent and grows until one of the lesions mentioned above is produced. An interference with the blood current results. In addition to this the receiving capacity of the ventricle is diminished. The seven layers of cardiac fibres may twist and turn in all directions. An increase of action may come from the nerve centres. The clot cannot be dislodged. The heart's action is virtually smothered, for where under normal conditions there is a cavity with walls on all sides, here there is a body solid in all its dimensions. In this condition the ventricular walls can neither dilate nor contract. This means a passive heart. A passive heart means death.

An ante-mortem heart-clot can be diagnosed. If in the aortic area there be heard a triple sound, the third and new element being the least distinct, highest pitched, and having a rubbing character; if the pulmonary second sound, which through the disease has been accentuated becomes longer, but less loud, losing its sharp character; if at the left apex the first sound is murmurish, or if just above the left apex there is a faint high-pitched murmur before the first sound, there is evidence of the presence of a clot.

Without discussing in any way the treatment of lobar pneumonia it will not be out of place to mention two remedies that have been used in combating the ante-mortem heart-clot. The *first* of these is the *early, systematic and continuous use of oxygen.* As the blood comes up to the lungs loaded with poisonous material, it finds a diminished areating surface. By adding a purifying agent, the natural methods can be increased. Oxygen will give most brilliant and satisfactory results. But it is useless unless three rules are followed: early, systematic, continuous. The *second* method has been in the use of *large doses of the carbonate of ammonia.*

In a conversation two years ago with Dr. William Gilfillan of this city, he mentioned a case of lobar pneumonia in an elderly patient, where he had used this way of giving the drug, and offered the suggestion that a trial of this method might be of value. Since that time, in many cases of lobar pneumonia, large doses of the carbonate have been given always with the single view of preventing or diminishing the heart-clot—defibrination of the blood. The doses used have been ten, fifteen, twenty grains every ten hours day and night. It has not been in common for patients to take such a dose for three, four or five days, commencing when there has been stationary consolidation. It has been interesting to note (and this is most important when the reason of giving the drug is considered) that without bad effects the ammonia could be withdrawn at once, instead of being gradually stopped.

Will the carbonate of ammonia defibrinate the blood? Headland gives authorities for and against such action. Mitscherlick years ago wrote to the effect that the carbonate of ammonia would prevent coagulation. In the second volume of the latest and best American authority, Shoemaker and Aulde, will be found this sentence: "Ammonia assists in maintaining the solution of the fibrin of the blood."

There are no objections to the large doses. In no case was there stomachic irritation. In a few cases a slight acneiform eruption or a dryness of the throat was noticed. Neither required treatment. The statement is frequently read that the carbonate of ammonia will irritate the stomach or have an injurious effect on the blood. In a continuous study of chest diseases, this drug has been one of the chief agents used, and in cases now numbering well into the hundreds, if the proper way of giving be followed, a single objectionable feature is yet to be noticed.

Lobar pneumonia in both private and hospital practice is a most dangerous disease. Since following the suggestion of Dr. Gilfillan, the per cent. of recoveries has been much increased. That the carbonate of ammonia has aided in doing this may perhaps be shown by dividing the cases into three series. First, those treated without the drug and who died; second, those with the signs of heart-clot who had the drug and who died, but before death the clot signs diminished, and upon post-mortem examination a small clot was found—possibly a remnant, possibly an imperfect formation; third, those with clot signs who had the drug and who recovered.

Thus there is brought together by means positive and negative evidence that in the disease lobar pneumonia, there is a tendency for certain changes to occur in the blood, which may find a nidus in the ventricles or in the tissue around the ostii for the development of a new growth which may become solid in its character, proving that in the treatment of the disease it is very important to give attention to this great mass of the blood circulating current.

DISCUSSION.

Dr. Gilfillan.—After receiving notice of the meeting I had not time to prepare a paper, but have just jotted down a few notes to guide me, not knowing what Dr. Conkling's paper would be My statements are on the administration of carbonate of ammonia and other remedies in the treatment of pneumonia.

My friend lays great stress on the tendency to death, and whatever the tendency, we should try to diminish that as much as possible. The manner of death in pneumonia comes by a flow from the lungs or from heart failure; it is a combination of both. When the disease is very extensive it diminishes the respiratory flow, and death in these cases takes place mostly by asphyxia.

In other classes where the disease is in the heart or trouble is made in the heart, and that is practically by heart-clot, there we have a disease coming to a very sudden termination. Persons may have a heart-clot and die slowly and gradually from it. There are other cases in which the patient seems to die suddenly, as if shot by a bullet. In those cases it is shown that the clot has been displaced.

In reference to the administration of carbonate of ammonia, I have been in the habit of giving that in moderate doses for a number of years, and that through consultation had with Dr. Austin Flint, and he was the closest of observers, and he thought it was a wise thing to give it, so as to keep the blood in circulation and prevent a tendency to the clot, I have been in the habit of giving muriate of ammonia as soon as a certain stage of consolidation was reached, and I am glad that I have not had any reason to believe that the heart-clot has not formed.

In May, 1890, I was called to see a gentleman of eighty years of age. He had often suffered from severe colds, but on this occasion he seemed to be considerably worse. I found that he had evidence of pneumonia at the base of the left lung. For about four days he seemed to get on very well under the ordinary treatment. One night I was called up to see him, and found that he was apparently in a moribund condition sitting up in bed, gasping for breath, his pulse very feeble and irregular. I thought the best thing in this case was to give oxygen, and I sent for a cylinder of oxygen, and at the same time there was such an immense amount of mucus in the bronchial tubes that it was evident he could not recover unless this mucus was removed. The only method to remove it was by an emetic, and I thought I would give him a dose of carbonate of ammonia until the oxygen came. I gave him half a drachm of carbonate, which had no effect; after waiting I gave him half a drachm more and that seemed to relieve him. Dr. Johnson on consultation expressed surprise and advised another dose; that was three doses, and that seemed to relieve him still further. At this time the cylinder of oxygen arrived, but it proved that in the middle of the night the drug clerk had sent an empty cylinder. By the time another cylinder came it was half an hour—by that time he began to feel very good. His breathing was quite steady, his pulse was regular, and the bronchial râles had very much diminished. The oxygen came and it was administered to him, and in a very short time he fell into a refreshing slumber. I was surprised that the carbonate of ammonia did not act as an emetic. I found the patient was getting along nicely, and I continued to give it since, but only gave it in fifteen grains every two hours, but in three hours after that he began to seem weak, his respiration was slow, there was evidence of effusion in both pleura; he died. An examination was made the next day, and there was found fluid in the right pleural cavity, and in the left pleural cavity there was half a pound. There was lobar pneumonia in the base extending to about one-half the lung; it was consolidated. He had suffered from consumption, the heart was very much enlarged from its normal condition and covered with fat. It had a thick coating of fat over it, which would lead to a kind of fatty degeneration. At the apex of it there was a polypus; it was not much more than one-twelfth of an inch. It was nothing but back water from a weak heart.

That gave me a start in regard to the administration of carbonate of ammonia, and I have used it in most cases since that time. My method is to give twenty grains every two hours or every hour, as the case may be. I administer simply water with twenty grains of carbonate of ammonia in a wine glass. I never knew it to irritate the stomach or to produce any unpleasant result. At one time I was afraid that taking such an amount would produce unpleasant effects on the stomach, but I have never seen that result.

There was one old gentleman suffering from an attack of pneumonia at eighty-nine years of age, and I began early with him. I gave him twenty grains of carbonate of ammonia night and day for six days, and then withdrew. He had no stomach symptoms produced by the taking of such a large amount of ammonia. At the same time I used other remedies; that was merely in regard to ammonia.

There was another case in which I used ammonia for a longer time, that is, twenty-five days, twenty grains every two hours for twenty-five days. That was a very remarkable case. There the patient was suffering from bronchitis and was attacked with a chill in church; brought home in an ambulance. The physician in attendance did not think much could be done. I found pulmonary constant cough, and raising up the patient I found the left lung was full. So my treatment was kept up for twenty-five days, and at the end of that time the patient was still coughing; so in all it continued thirty days. Now, I think if carbonate of ammonia was injurious to the stomach, as some maintain that it must have in this case shown its injurious results. On the contrary, she can now walk about and has fair use of the lung.

I say I used this in most cases since that time. I have only had one patient who could not take ammonia and that was a rather complicated case. The patient was suffering from cirrhosis of the liver, and finally contracted pneumonia. I thought I would give ammonia.

At first the tongue was very red as in cases of hepatic diseases. In that case I could not administer it, and the patient died.

Ammonia is a stimulus to the heart as well. You all know what relief it gives to a weak heart, where ammonia will relieve the tendency to syncope. In many cases where there is fatty degeneration of the heart, I keep the heart active by continued administrations of ammonia compounds with other heart drugs. I look upon the action of ammonia in all cases of heart disease as being very important, and perhaps not sufficiently appreciated by the profession at large.

There was one lady that I attended who suffered from fatty degeneration and other troubles, who had been brought from a state of weakness to fair health. She had had a prescription made up which had not arrived. In the meantime she took ammonia; she took but three doses, and by the time the other remedy arrived she was pretty well.

I want to thoroughly emphasize this matter, because I think the value of ammonia is scarcely appreciated by the profession at large. It leads to the elimination of carbonic acid from the lungs. It has, I am satisfied, a stimulating effect upon the nerves, and draining the blood more thoroughly through the lungs, and in that way clearing up the blood. I think that is about all I will say in regard to the administration of ammonia in these cases.

The administration of ammonia does not interfere at all with the administration of food or other stimulants. I have a liking for all these cases in the use of oxygen. In oxygen I think we have something that is capable of much greater utility than it has proved itself to be, and I think that is because physicians are very slow in making patients use it. I think oxygen is one of the remedies that ought to be given early—perhaps when the symptoms begin—it frees the lung from a great amount of mucus. When the respiratory area of the lung is very much diminished, we want to have the sound lung to work with as little effort as possible. Then when the blood is kept in good condition, when it is not poisoned, oxygen holds the heart and keeps the organs and functions in good condition. You will find that when patients become delirious that the remedies have not so much effect as when the system is sound and hearty. I think the use of oxygen is one of the things we are all coming to in a little while. I have given oxygen about one-third of the time. I do not administer it continuously, but give it for twenty minutes and cease it for twenty minutes. Of course that requires a trained nurse.

The administration of heart tonics, such as nux vomica and strophanthus. Nux vomica acts as a special tonic to the fibres of the heart, and in addition to that it acts powerfully as an expectorant. It is one of the best expectorants given in moderate doses that you can find. It acts on the muscular fibre of the bronchial tubes; besides it has a good effect on the stomach It is a powerful tonic on the brain; it acts on the bronchial tubes and acts on the stomach as well.

Strophanthus I have used for an effect on the heart. I give about six drops of strophanthus and two of nux vomica every two or three hours as the case may indicate.

In regard to the use of digitalis I am satisfied it, in the majority of cases, disturbs the action of the heart. It slows the action of the heart and it is just in those classes of cases where the heart is acting irregularly that it is useful.

The cases of Dr. W. were cases of dilated heart, where the heart acts so fast that the cavities were not full of blood. Digitalis then slows the action of the heart, compresses the cavities of the heart, and in that way relieves the muscles of the heart from any damaging effects and overaction.

If we have in pneumonia a heart acting strongly, it would be very unwise to put an extra load on the heart by giving the patient digitalis which slows the action of the heart.

Then there is a liability of heart-clot in cases where the pulse is weak and feeble, and there we discourage the administration of all those drugs which have the effect of slowing down the action of the heart. If you have a circulation going along very slowly, the heart acting very poorly, and the blood full of fibrin, you have the only conditions which lead to heart trouble. The deposit of fibrin goes on and on; it is like the formation of a crystal; when the first forms, the others keep growing and enlarging, and anything which acts as a nucleus will lead to the formation of the heart-clot.

I am sorry I did not attempt to prepare a full paper on this subject. I would just say in recapitulation what I would advise in these cases, that is, a free use of carbonate of ammonia; the use of alcohol; the early use of oxygen, and the use of strophanthus and nux vomica to keep up the circulation.

In conclusion, I would say in regard to the fever in pneumonia I do not think it is worth while to combat the fever unless you get an extraordinary high temperature, as 104° or 105° for instance. You want to bring the patient through this serious illness, and the great thing I think is to avoid the formation of a heart-clot.

Dr. West :—The paper of Dr. Conkling was a paper I was very much interested in and the importance of the occurrence of the heart-clot in pneumonia seems to me to be a subject which we should especially consider. There may be some difference of opinion as to the frequency of the occurrence. Certainly we tyros and amateurs are entitled to a difference of opinion. Some claim that heart-clot ante-mortem is of very frequent occurrence in pneumonia. Others deny that it occurs except during the death agony, and the clot which is found although it is thoroughly hyperinotic and presents all the appearances of an ante-mortem clot. Such a clot has been described as a clot which is formed during the last few hours of life. However, that may be, notwithstanding these differences of opinion, some maintain that it occurs quite frequently. I think I state it correctly when I say that heart-clot was of very frequent occurrence ante-mortem. Bristow says it does not occur at all. The probabilitiy is that such views are extreme. The heart-clot probably occurs much more frequently than is recognized. It is wonderful how the heart will adapt itself to a very considerable size of foreign body dependent upon the existence of that clot in the cavity of the heart. Where the clot occupies one side of the heart, so as not to interfere very much with the passage of the blood through the cavity, then that clot may extend through one of the openings into another cavity, and indeed, there are instances reported where it has been traced through one or two of the orifices and into the vessel, and yet the heart performed its work very satisfactorily. But I would approach the subject from some different point merely to draw one practical conclusion, and that is this: In pneumonia you have two conditions which are especially favorable to the formation of heart-clot—a hyperinotic blood and a feeble acting heart. With these two factors and the slowing of the blood-current, with blood that is inclined to clot, there a decided danger presents itself. Now the deduction which I would draw from that is, that it is especially important that we should be careful not to disturb our patients suffering from pneumonia. I think that is as important a factor in treating the case as the administration of carbonate of ammonia or any stimulants, and I wish to emphasize that point because of the fact that we oftentimes have patients suffering from pneumonia allowed to sit upright in bed to allow us to make an examination of the chest. Such a thing as that always strikes me as wrong. It is a practice that should be discouraged, and discouraged as emphatically as we are capable of doing. If we wish to examine the posterior portion of the lung, gently roll the patient on the face so as to make your examination as easy as possible. But I do not allow a patient to sit up. Perhaps I may speak a little emphatically upon this point, but I was impressed with it in a case of pneumonia. A consultation being forced upon me, and the consultant coming in and having the patient sit upright and examined. About two hours later I was sent for and got there and found the man dead. He was doing well and suddenly died from a heart-clot.

Another point bearing in this same direction, and that is this: The importance of our insisting upon our patients being educated to the use of the conveniences of the sick-room in any acute disease—a fact which I think we too frequently neglect. This applies to typhoid fever and any of the very severe and acute diseases as well as pneumonia, for the reason that in the early parts of a disease of such a nature, it is better and it is easier for the patient to acquaint himself with the use of these conveniences rather than that the time should be postponed until he is very sick. The general subject of cardiac stimulants I will refrain from.

Dr. Butler:—As far as the manner of death is concerned, it appears to me that we have, first, those cases in which death really occurs through the lung, or instances in which there is a filling up of the bronchial tubes, so that the patient dies from a lack of oxygen.

Then again, all the cases of sudden deaths correspond very closely to those the doctor has referred to. As to the ætiology of the clot I beg leave to differ a little from the doctor. It has appeared to me that the clot is not so much a primary factor as it is a secondary consequence of primary heart weakness.

Acute lobar pneumonia is a specific disease with local manifestations. It is a specific poison, but what it is no one can say just at present. It may be due to one or two or three varieties of bacillus. But whatever it is, the signs point towards the presence of a specific poison circulating in the blood and having a very marked and distinct influence upon the nervous system, on the power of the heart, of the lungs and the entire body, and where the heart-clot occurs it seems to me more probable that it is caused more from weakness of the heart produced by the effect of the poison acting upon the nervous mechanism of the heart, than directly due to the tendency of the blood to coagulate.

Dr. Conkling:—The heart is the strongest organ in the body. Upon its strength life depends. One year ago I made a post-mortem upon the body of a woman ninety-one years of age. There was a general arterio-capillary fibrosis, but the heart itself was normal, with smooth coronary arteries. Why the heart was in that condition cannot be stated. It is certain, however, that it was the cause of the long life. If in elderly people the heart is strong and the other organs, especially the pleura and kidneys suffer only from lack of perfect nutrition and not from organic disease, life may be prolonged for many years and acute disease fought successfully. The heart cannot stand auto-infection. I mean the auto-infection from kidney disease: the non-elimination of urinary products, the absorption into the circulation and the production of changes in the pericardium, endocardium, and cardiac muscle. Nor can the heart stand suppuration in distant organs. These conditions weaken it at once. But in acute disease, as in lobar pneumonia, where the patient goes to bed well, and has during the night the sudden chill of pneumonia, dying in eight or nine days, the mechanism of the heart never, by any weakness of its muscular fibres, can be held accountable for the death.

There is a word to be said in answer to the statement made relating to the time of the appearance of the clot, *i.e.*, that is post-mortem and not ante-mortem. All the arguments that have been brought forward are ones with which I am familiar. Some of them I once believed. I have seen post-mortem examinations made in which the heart was opened *in situ*, and the contents of its cavities torn out without regard to their nature, character, formation or attachment. But when more knowledge came of things medical and more time was spent in the dead-house, I found that these peculiar formations seemed to come in only certain classes of cases. I wondered then if there could be any relation, in the way of cause and effect, between what was found in the body and the disease itself. Finally there came personal cases with the personal making of post-mortem examinations. The presence of the clot seemed to bear a relation to certain diseases. A little further study showed that it might be well to keep a strict account of the matter and see if clinically any explanation could be found.

This necessitated at once the commencement of the study of the manner of death in certain diseases—a subject perhaps not very attractive but yet very important. For in a dying person the condition of the pulse, quite different frequently in the two wrists, as found by the finger or the syphgmograph, the peculiar character of the heart sounds, the position in bed, the respiratory and circulatory conditions may all teach us something that may aid in preventing other patients from dying in just the same manner.

You go into the wards of the hospital to the bedside of the man dying with enteric fever. He is under thirty years of age; a longshoreman, strong, powerful, vigorous, who has never been ill before. It is the end of the seventh week; over forty days of a disease with great constitutional disturbance. He is lying flat on his back. His pulse is weak, feeble, thready. There is an apical systolic murmur, meaning mitral regurgitation, coming from imperfect closure or dilatation of the ventricle, from lack of power. It invariably means death. Only a small portion of the pulmonary apparatus is being used. The eye is glassy, the mind dull. Just before death there may be a convulsive movement of the trunk, the arms may be thrown about, the lower extremities are seldom moved; or the patient may die so quiet that the attendants scarcely know just when death comes.

In the same ward in another bed is a case of lobar pneumonia at the eighth day in a man from the same walk of life as our first case. The pulse has an increased number of beats. To each there is added a quick element which means irritability. The heart sounds are peculiar, the respirations are panting, but the eye is bright, the mind is clear. Even as you are standing by the bedside of the patient, there may be a tremendous heave of the thoracic walls, the hand clutches the neck, every movement is to gain air or blood in the lungs, something to sustain life, and then with a sudden jerk the head falls forward, chin on sternum, and the man is dead.

Is there any similarity whatever in the manner of death in the two cases? You may say that the fever man's heart caused death. You call it asthenia, and you prove it in the dead-house. You cannot call the pneumonia man's heart asthenic, nor can you prove it in the dead-house. If you have an ante-mortem cause of death in the one case, you must have it in the other. The post-mortem will find the fever heart's tissue weak, flabby, friable, degenerated, tearing like blotting paper, while the pneumonia heart is of good color, with muscular fibre toned up to the highest pitch of intense activity. There is no weakness there. You find in it a heart-clot. You call it ante-mortem for three reasons. 1st. Because the patient has died just as patients must die with circulatory obstruction. 2d. Because of the formation and the disease. 3d. Because the organs closely related to the heart in the way of blood supply are in the condition which comes from mechanical disturbance in the circulation

There is but one way in which to make conclusive this evidence. This is by the clinical study of the heart in lobar pneumonia. This means that the heart must be examined in every case, constantly, many times, whenever the patient is seen.

Take for instance a hospital ward in which there are say fourteen beds. There is one case of lobar pneumonia. In the other beds are patients with various acute diseases. You make a painstaking, careful, systematic examination of the pneumonia heart. Record what you find. Go to thirteen other beds and examine thirteen other hearts, and not in a single instance will you find what you have heard in the heart of pneumonia. Your patient dies. You find on post-mortem examination a heart-clot. Record its position and see if it corresponds with your clinical notes. You have other cases of pneumonia. You examine their hearts, comparing the findings with the examinations of other hearts. You have no duplication. There are certain definite, peculiar signs. I have mentioned them in the paper. When they occur, you find on post-mortem examination a clot, accounting for their presence. Your clinical cases will outnumber your post-mortem examinations, but still you have enough to prove that you have an ante-mortem cause of death in an ante-mortem heart-clot.

But there are other ways in which a patient dies in lobar pneumonia, not like our illustrative case. I mean those cases in which death comes on the eleventh or twelfth day, or even as far advanced as the eighteenth day. Death comes in a slow gradual manner. These are severe cases of pneumonia. I believe that they belong to those series in which the commencement of the disease is deep seated. Again, I believe that many cases of lobar pneumonia in which we get increased vocal fremitus, dulness, bronchophony, and bronchial breathing, extending over a large extent of surface, are in reality very superficial, going into the lung for only a short distance. I would offer an observation upon the deep-seated cases from a study of the sulci of the lungs. Pneumonia comes from an irritation in the parenchyma of the lung. This parenchyma is at the base of the sulcus as well as over the most superficial portion of the lobes The pain in pneumonia is from an inflamed pleura. There may be deep-seated pain without any signs. Again and again have I demonstrated upon post-mortem examination the pleurisy in the sulcus. If the pneumonia start at the base of the sulcus, it will go to the deepest, the most remote portions of the lung. For days there will be symptoms without signs. It comes gradually to the front. Finally, we get the evidences of consolidation under our hand and ear. Resolution may come in the deepest portion without our knowledge. The consolidation near the surface continues. All this time the heart is laboring. There may be a cramped position, or there may be a huge clot so arranged as to allow the blood to float in and around it. Death may come in either case in a slow manner. The heart from its position cannot work, that is all.

This cramped position of the heart is very important. It frequently bears a direct relation to the shape of the chest. There was a paper read before this Society last month by Dr. Mosher, the subject title of which was: "Habitual Position Affecting the Symmetry of the Body." To my mind the beauty of that paper was the original way in which what seemed to be mere unimportant details by themselves, were grouped together in one strong harmonious whole. The configuration of the outer eyelid will illustrate my meaning. In the paper something was said about position affecting the thorax. Dr. Mosher, without going into details, gave a hint as to the effect of position on the organs of the thorax. I very well remember that one of my early cases of tuberculosis was in an artisan, whose occupation was sedentary. The man was round-shouldered, small in front, large behind. Anteriorly there could be obtained no evidence of disease, for there was no lung there. Posteriorly, where there was a large extent of pulmonary surface, the diseased lung was found. The case was one of those in which the arc of the circumference was increased, without any increase in the area of the circumference. The antero-posterior diameter was increased. There was a large space posteriorly into which the lung fell. Such a chest would influence the position of the heart in lobar pneumonia. The present paper was completed four months ago, and none of the cases of this year have been incorporated in it. I may refer to a case. A post-mortem showed, upon removing the sternum, a large extent of pericardial surface, high up in the median line. The right lung scarcely came to the right parasternal line. If pneumonia had not been diagnosed, it would not have been suspected at that stage of the post-mortem. The right lung, weighing fifty-six ounces, had gone back toward the spinal column, was under the heart, and had pushed that organ up in the median line so that it lay between two solid bodies, bone (sternum) in front, and consolidated lung behind. In such a position it could not work.

Whenever pleuritic effusion exists in lobar pneumonia, the fluid should be at once withdrawn—all of it.

In conclusion, it may be said that the different stages of pneumonia require different treatment. The special cardiac stimulants may be used: the alcoholics, belladonna, caffein, camphor, ether, musk, strychnine—one or more. But it must be remembered that they are used, not because there is inherent weakness of the heart, but because aid is required to perform the normal cycle of cardiac action, since from pressure outside, or a new growth inside, there is a mechanical obstruction.

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CLINICAL HISTORY OF A CASE OF BRIGHT'S DISEASE COMPLICATED WITH CARDIAC HYPERTROPHY.

[To which was awarded the "Dudley Gold Medal" for the year 1892.]

BY JEROME B. THOMAS, JR., M.D.

Class of 1892. Long Island College Hospital.

Eliza Boardman, æt. fifty years; born in Germany; family history extremely good, her mother having died at eighty years, her father now alive at ninety years. She has been married thirty-two years and has borne eight children, all of whom are alive and well. No miscarriages; parturition always easy and without complication.

I can elicit no history of malaria, none of attacks of nephritis antecedent to the present one, none of unusual exposure, of catching cold. No history of eye symptoms, stomach crises, convulsive seizures, headache or vertigo. Indeed, the patient was, according to all accounts, an unusually healthy, almost robust woman until six months ago when her present malady began to make itself felt.

In June, 1891, she noticed on rising in the morning, that her feet and lower eyelids were swollen; did not notice increased frequency of micturition till three months later when she complained of having had to rise as often as six times during the night to pass urine. The urine was light in color and profuse in quantity. In September she began to suffer with dyspnœa, for the relief of which she sought treatment at the College Dispensary. She complained of fatigue on slight exertion.

The foregoing subjective testimony is necessarily meagre and unsatisfactory owing to lack of observation or defective memory on the part of the patient. Doubtless many symptoms had developed prior to last June which were either unobserved or forgotten.

The patient first came under my observation early in January, 1892, and presented the following conditions:

Marked cachexia; œdema of the feet, legs and inferior palpebræ; dyspnœa intense and aggravated by the slightest exertion, the patient being unable to sleep in the recumbent posture; micturition infrequent and urine scanty; dry, hacking cough, expectoration viscid and raised with difficulty; appetite fairly good, but not to be indulged on account of the consequent dyspnœa; bowels irregular; flatulency; emaciation.

Physical examination.—Lungs: Inspection—Breathing accelerated and labored.

Auscultation: Inspiratory sound exaggerated, especially in infraclavicular regions. Expiratory sound prolonged. Few sibilant râles.

Percussion: Hyper-resonance, especially in infra-clavicular regions.

Heart: Inspection—Increased area of visible impulse. Epigastric impulse with marked undulatory movement.

Palpation: Increased force of heart-beat with greatest intensity in the sixth intercostal space, one inch to left of linea mammillaris. Heaving impulse in epigastrium.

Auscultation: First sound of heart dull and prolonged. Aortic second sound weakened, pulmonic accentuated. Above location of the apex beat verified by auscultation. A systolic blowing murmur heard most distinctly at the apex, propagated over an area four inches in diameter and to the left along the ribs as far as the linea axillaris.

Percussion: Wide extension of percussion dulness. Superficial cardiac space enlarged.

Pulse: Ninety per minute, increasing to one hundred and ten or one hundred and twenty on slight exertion or excitement; feeble and compressible, notwithstanding the apparent force of the cardiac impulse.

Abdominal examination negative. No pain or tenderness in lumbar region.

Up to this point the most striking features of my case are referable to the cardio-vascular system. Indeed, the rational symptomatology would scarcely suggest a serious involvement of the kidneys, and an examination of the urine was essential to the discovery of the true causative factor in the disorder.

Urine: By comparing the records of urinalyses made at various intervals during January, 1892, I have computed that the patient is losing an average of sixty-two grains of albumen per day, the maximum amount passed in twenty-four hours being ninety-three grains; the minimum forty-three grains. The urine contains hyaline, waxy and granular casts, granular detritus and renal epithelium in small quantity. Dropsy and lessened arterial tension, due to cardiac failure, have reduced the hitherto excessive fluid element of the urine to the scanty average of twenty-two ounces per day; the maximum, thirty-seven-and-a-half ounces, the minimum, sixteen ounces.

In this connection I note the fact that the urine passed on first rising contained only a very few hyaline casts, hard to detect and easily overlooked by the busy or unskilled examiner; whereas, urine passed later in the morning, after some exercise and increased heart's-action, contained all the elements that I have enumerated above, and in marked amount. I mention this fact as a protest against the stereotyped request of the ordinary practitioner for first-rising urine for purposes of microscopical examination. This applies, of course, to the cases (and they are the majority) where it is difficult or impracticable to secure the total amount of urine passed in twenty-four hours.

Last, and perhaps most important as denoting the functional inactivity of the kidneys, urea is being eliminated in very scanty amounts, even allowing a good margin for the sedentary habit and restricted diet of the patient. The average amount of urea passed in twenty-four hours is one hundred and forty-two grains; maximum, two hundred and forty-one grains; minimum, one hundred grains; and yet with this marked deficiency of elimination it is interesting and suggestive to note the entire freedom of the patient from the series of nervous accidents included under the term "uræmia."

During the past summer I had an opportunity of observing five cases of acute nephritis superinduced on the chronic condition, and was struck by this same lack of parallelism between the amount of urea eliminated and the comfort of the patient. I have repeatedly observed one or another of these patients suffering acutely from nausea, vertigo, headache and other uræmic symptoms with a urea elimination of two hundred grains or more. The following day the patient passes one hundred grains of urea and is perfectly free from all the distressing symptoms of the day before.

Saunby quotes a case of persistent uræmia in spite of the elimination of four hundred and fifty grains of urea per day.

These facts are to me very suggestive and militate seriously against the classical explanation of the ætiology of so-called uræmia.

Diagnosis.—The foregoing rational symptoms and physical signs lead to an inevitable diagnosis of chronic nephritis with secondary cardiac involvement. It is the further differentiation of the renal lesion which must be approached with caution. In seeking for a classification of nephritis from a clinical standpoint, I have found that of Saunby to be the most convenient and satisfactory. He includes all forms of nephritis under the following heads:

Febrile nephritis, acute and chronic. Toxæmic nephritis, acute and chronic. Obstructive nephritis, acute and chronic.

The second division includes nephritis due to acute gout, poisoning by animal, vegetable and mineral poisons, and finally, the great group designated lithæmic, depending, probably, upon "irritation of the kidneys by the excessive elimination of poisons, of which uric acid is the type."

It is to this class that I regard my case as belonging, so that clinically, I shall classify it as a case of toxæmic nephritis of the lithæmic variety, pathologically, as chronic diffuse nephritis probably of the contracting variety, the stroma of the organ being especially involved. I have been led to this differentiation by the following features of the case:

Insidiousness of the disease, œdema being the first sign to indicate a serious condition which must have long existed. No history of attacks of acute nephritis.

No history of acute febrile disease. Frequency of micturition, urine pale and profuse.

Age of the patient, lithæmic nephritis being very common after forty years; febrile nephritis and its sequelæ rare.

Abundant albumen and casts although very uncommon early in this form of nephritis—the lithæmic—are very apt to appear late in the disease, and like the decrease in quantity of urine may be explained as due to the failing heart, lowered arterial tension and the progressive encroachment of the interstitial substance of the kidney upon the parenchyma.

The following generalization of Saunby throws still further light upon the conditions under consideration: "The large, pale kidney is the result of prolonged or repeated severe inflammations; the small red (or contracted) indicates an inflammatory process of prolonged duration but of minimum intensity."

It is precisely this latter condition which we would expect to obtain in a pair of kidneys which had been engaged in eliminating from the blood an excess of uric acid or allied toxæmic waste product for a period of ten or twenty years.

The most urgent symptoms that my patient presents are those referable to the heart, and for the present, at least, they overshadow in importance the lesion of the kidneys, to which they owe their causation.

The heart is hypertrophied and dilated with insufficiency of the mitral valve and consequent regurgitation.

The compensatory action of the right ventricle is beginning to fail, and the lungs are in consequence engorged with venous blood. There is some emphysema most marked at the apices of the lungs. There is marked anæmia due to disturbed circulation with imperfect primary and secondary assimilation, this in addition to the blood dyscrasia attendant upon the nephritis. With the depraved state of the blood and inefficient circulatory apparatus we necessarily have more or less gastro-hepatic and intestinal disturbance.

There is marked œdema of the lower extremities following the weakened heart, diminished arterial tension and impoverished and hydræmic blood.

Pathology.—The pathology of chronic nephritis may be conveniently classified under three heads:

1. Pathology of the kidney.
2. Pathology of the cardio-vascular system.
3. Pathology of the blood.

1. If my diagnosis of the case under consideration be a correct one, the kidneys of my patient probably present the following characteristics: Small, darkened or mottled on section, giving a sense of toughness or resistance on cutting; capsule adherent, surface rough and nodular, cortex and cortical columns diminished in thickness, markings indistinct or absent.

I have before me a section of kidney which I have examined microscopically and assume to be very like the inaccessible organs of my patient. The interstitial connective tissue is greatly in excess encroaching upon and breaking down the parenchyma. The capsules of Bowman are thickened, with hyaline degeneration of the glomerular tufts. The walls of the arterioles are thickened. Some of the convoluted tubules are dilated and lined with atrophied epithelium, others contain degenerated epithelial cells, hyaline and granular casts; still others have the lumen almost obliterated by the contracting connective tissue.

2. Since Richard Bright, the great physician and pathologist of St. Guy's, first called attention to and suggested explanations of the cardio-vascular changes so characteristic of chronic nephritis, very little progress has been made in this direction and no better or more plausible theory of causation has yet been advanced. Bright

suggests that the cardiac hypertrophy may be due to the impure blood affording an unwonted stimulus to the organ. Dr. Hamilton ingeniously argues that the hypertrophy may be due to increased capillary resistance, dependent upon alterations in the specific gravity of the blood-serum with consequent displacement of the axial stream of red blood-cells followed by increased friction.

Whatever the explanation may be, it is a clinical fact that more than half the cases of nephritis induce hypertrophy of the left ventricle of the heart, and in contracting kidney the proportion is even greater. This may or may not be accompanied by a general thickening of the vessel walls throughout the body, the so-called arterio-capillary fibrosis, which condition some have regarded to be important in the causation of the hypertrophy. Flint points out that this increase of cardiac propulsive power is largely compensatory for the loss of renal function incident to the small granular kidneys, the compensation, however, being less complete for the excretion of solids than for that of the water of the urine.

In the case at hand the cardiac hypertrophy has reached its limit and dilatation has set in, giving us a weak, compressible pulse instead of the bounding, high-tension pulse so characteristic of the early stages of contracting nephritis. The heart is too weak to do its work, and as a consequence of this failure we have the circulatory equilibrium broken and the inevitable sequelæ of this condition, venous engorgement of the lungs, portal and general capillary systems, evidenced by dyspnœa, dyspepsia and œdema. The dilatation has disturbed the normal relation of the leaves of the mitral valve to such an extent that the valve has become insufficient and mitral regurgitation established. This condition is undoubtedly the chief factor in the causation of the dyspnœa.

3. With the kidneys failing to eliminate its most noxious elements, the liver and alimentary tract failing to supply it with an adequate amount of nutritive material, and finally, its albuminou constituents drained away at the rate of sixty-two grains a day, we cannot expect to find the blood in any other than a markedly pathological condition. The intense pallor of the face, the ashen hue of the mucous membranes, and the general malnutrition testify to the depraved blood state. As a matter of pathological interest I have made an analysis of my patient's blood with reference to the quantity of hæmoglobin, which I find to be reduced from the normal proportion of fourteen per cent. of the blood weight to eight per cent. I have also taken advantage of the ingenious Thoma-Zeiss corpuscle-counter to estimate the number of red blood-cells in a

given quantity of blood and find the proportion to be 4,200,000 to the cubic millimetre.

This is very nearly the normal ratio, and at first glance appears inconsistent with the results of the hæmoglobin test and the evident poverty of the blood. It is, however, readily explained by the escape of the fluid elements of the blood into the cellular tissue of the body, leaving the blood reduced in volume with a decided increase in the relative proportion of the corpuscular to the fluid constituents. This decrease in fluidity is further evidenced by the slight daily excretion of urine which cannot be altogether accounted for by the low arterial tension. The apparent anomaly in regard to the number of red blood-cells points out another condition of interest, namely, that the individual red cells are poor in hæmoglobin, for though one hundred parts of the blood contain the normal number of red cells, they contain little more than one-half the normal proportion of hæmoglobin. Hence, it is clear that the total loss of hæmoglobin must be considerably greater than the difference between eight and fourteen per cent.

To sum up, then, we have the blood diminished in volume, in the number of red cells and in hæmoglobin.

Being dependent upon so impoverished a medium both primary and secondary assimilation are bound to be profoundly disturbed, and the heart and kidneys are still further embarrassed in their task by inadequate nourishment.

Ætiology.—The causation of contracting nephritis is the most obscure of the whole class of renal inflammations, and we are forced to recur to that convenient expression "tendency," which like "functional," is no more than an admission of our ignorance concerning the ultimate causation of the disease to which it is applied. This case is more than unusually barren in suggestions of ætiology. The family history is remarkably good, and excludes the matter of heredity. There is no history of acute nephritis, none of chronic malaria. Indeed, the personal history is one of absolute freedom from illness up to six months ago. On the other hand, we find some suggestions of causation in the following predisposing conditions:

The woman was, as far as I can learn, of a plethoric temperament with a teutonic predilection for malt liquors and heavy foods, and a slight family tendency to rheumatism. Her hygienic surroundings have been poor, and she has borne several children.

But most important of all is the character of the climate in which she has spent at least the last fifteen years of her life. The cold, moist atmosphere in which we live here in Brooklyn has the effect of habitually depressing the function of the skin and thus throwing an unnatural burden upon the kidneys.

According to Garrod, the suppression of perspiration is followed by increased acidity of the urine and diminished alkalinity of the blood, leading to the accumulation of uric acid in the system. It is the habitual elimination of this excess of uric acid from the blood which is believed to be the ultimate ætiological factor in the production of lithæmic nephritis. I regard uric acid as the only tangible exciting cause in the present case.

Prognosis.—The prognosis is very serious. The heart has degenerated to such an extent that even if it can be whipped up to again perform its proper function, there is a limit to stimulation, and the organ must soon fail under its increasing burden. The kidneys are so thoroughly deranged in function that nature must rely largely on the skin and bowels to get rid of her waste products; a failure on the part of these accessory organs would be necessarily and promptly fatal.

Treatment.—The principal lines of treatment to be followed in this case may be summed up as follows: 1. Support and stimulate the failing heart. 2. Enrich the impoverished blood. 3. Maintain the activity of complemental organs. 4. Prevent obstruction of the uriniferous tubules.

In the first place, give the heart a minimum amount of work to perform by enjoining upon the patient absolute rest and in the recumbent posture unless the dyspnœa be increased thereby. I would give this patient infusion digitalis two drachms, plus sulphate strychnia grain one-sixtieth t. i. d. to stimulate the heart and arterioles, hoping thus to overcome the venous engorgement of the lungs and portal system and relieve the general œdema.

Strychnia is said to increase the action of digitalis and to assist the stomach to tolerate the latter drug. So we have an important indication for its use in this instance, for much depends upon the ability of the stomach to properly assimilate both food and medicine. If, after all, the organ cannot tolerate digitalis, I would substitute tinct. strophanthus or sulph. sparteine.

For the anæmia, a nutritious and easily assimilated diet is indispensable. I would not, however, restrict the diet to milk, gruel, toast and similar bland foods, for, in my opinion, meat-juice broths or chops in moderate quantity, will do more good by aiding nutrition than they can do harm by increasing the nitrogenous elements of the blood. If tonics are necessary, we may use the milder preparations of iron, such as the tartrate or citrate, pill of the carbonate of iron or reduced iron. Keep the bowels open with such mild cathartics as the saline mineral waters, compound licorice powder, bitartrate of potassium.

Keep the skin active by warm clothing and frequent hot air or vapor baths.

To relieve obstruction of the renal tubules by washing out the cast material, frequent and copious draughts of milk or distilled water are the most natural and efficient means. The milk has the further advantage of being an ideal food.

Among the artificial diuretics digitalis is probably as efficient as any (they are all notoriously unreliable) and increased effect may be gained by adding acetate of potassium in twenty-grain doses. Bitartrate of potassium has a diuretic action, and is said to lessen albuminuria. Both of these salts are extensively used in the treatment of chronic nephritis in spite of the theoretical importance of potassium salts in the pathogenesis of uræmia.

If the patient should react to the general treatment I have indicated and be able to resume the duties of life, she should be cautioned against overwork, exposure, the use of malt and spirituous liquors except in medicinal doses, and all dietetic imprudences.

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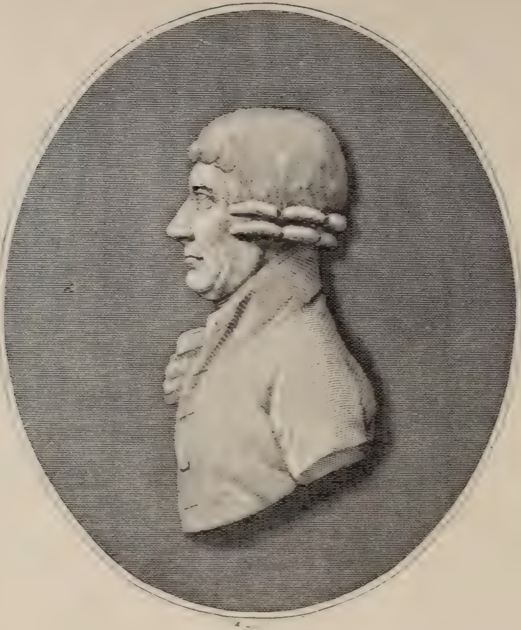

JOHN COAKLEY LETTSOM, M.&L.L.D.

F.R.S. F.A.S. F.L.S. &c. &c. &c.

Was born on the small island of Little Vandyke in the West Indies, in 1744, and when but six years of age was sent to England to be educated. He was consigned to the care of Mr. Fothergill, a well-known preacher among the Society of Friends, who intended, when the boy had reached the proper age and experience, to assign him to the care of his brother, the celebrated London physician, who was then at the height of his wonderful career.

After receiving a slight preliminary education, he was apprenticed to a Yorkshire apothecary named Sutcliff. Dr. Lettsom, in a letter to a friend, tells the story of his introduction to his new home. "I went to Settle, an apprentice, a fatherless lad. I rode from the house of Samuel Fothergill, at Warrington, alone; and my guardian, when he parted with me, impressed upon my mind his last words: 'Please thy master, and, above all, *please thyself*. If thou turnest out well, I will recommend thee to my brother, the doctor; and never forget that to be good is to be happy.'"

"Poor Sutcliff! once, and once only, wast thou angry with'me, and I shall never forget thy words: 'Thou mayest make a physician, but I think not a good apothecary.'"

The people had been informed that Sutcliff's new apprentice was coming from a country where the feet of the people were towards those of England; and the day that the young apprentice arrived, the surgery was surrounded by a throng of gaping rustics, anxious to see a young gentleman accustomed to walk on his head.

On the termination of his apprenticeship he went to London, where he remained two years attending medical lectures and the practice of St. Thomas's Hospital. He then returned to the West Indies to take possession of his paternal inheritance; where his first act was to emancipate a number of slaves which constituted about all the property there was. He commenced practice there and soon accumulated enough to enable him to return to Europe. He first became a pupil of Cullen, in Edinburgh, whose views on the causes, nature and treatment of fever he very freely availed himself of, in his first publication, "Reflections on the General Treatment and Cure of Fevers," which he published about this time. Thence he went to Paris and Leyden, where he received the degree of M.D. in 1769. He then settled in London, and through the efforts of Dr. Fothergill, and the warm interest of his co-religionists; and his marriage shortly after to a lady of wealth, was soon in active practice.

For many years he enjoyed the largest medical practice in London. Of his real merits as a practitioner we know but little, but of his character as a philanthropist it is impossible to speak too highly. His name was to be found associated with every project for the public good: he was on terms of friendship with the most distinguished characters of his day; and from all parts of England, from the colonies and America, he received the most flattering proofs of the estimation in which he was held.

Although Lettsom was never in the United States, we seem to have had high appreciation of him, for the medical and literary institutions and societies of New York, Boston and Philadelphia, seem to have bestowed upon him about all the honorary titles within their gift. We are specially interested in him, because after the discovery of vaccination by Jenner, Dr. Lettsom was the first person who sent the vaccine lymph across the Atlantic consigned to the care of his friend Dr. Waterhouse, of Cambridge, from which it spread throughout the United States.

The list of societies to which he belonged, and the works he has written would require far more space than we have at our disposal.

He died after a short illness, in 1815.

The receipts from his practice were very large, being in some years as much as £12,000. The following *jeu d' esprit* was written by Sir M. Martin:

Such swarms of patients do to me apply,
Did I not practice, some would surely die:
'Tis true, I purge some, bleed some, sweat some,
Admit I expedite a few, still many call

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EDITORIAL.

AMERICAN PUBLIC HEALTH ASSOCIATION.

The twentieth annual meeting of this association will be held in the City of Mexico, November 29th, 30th, and December 1st and 2d.

This association, which was originally limited to the United States, now includes in its membership representatives from Canada and Mexico, and it will doubtless soon embrace every country in America.

The next meeting promises to be a most interesting one. The Mexican government will take a prominent part in the entertainment of the association. Among the points of interest which will be visited will be the city itself, and the castle of Chapultepec. The great work, now nearly finished, for the drainage of the Valley of Mexico will be thoroughly examined. Members of the profession and others who desire to avail themselves of this opportunity of visiting Mexico can receive the benefits of reduced fare, etc., by becoming members of the association at an expense of but five dollars. Applications may be made to the Editorial Committee to be presented to the Secretary of the association.

CHOLERA.

That cholera exists in Russia and is travelling westward seems to be undisputed. Its presence in the City of Paris has been assumed by some on the ground that an epidemic of a rapidly fatal diarrhœal affection, which from April 5th to July 25th produced no less than 159 deaths, could be nothing less than Asiatic cholera, notwithstanding the fact that it was called "cholerine." The only suspicious circumstance seems to be that the commission which was designated to investigate the epidemic has, after an apparently thorough investigation, presented a report which the authorities have not published. It is reasonable to suppose that had this report been of such a character as to demonstrate the epidemic not to be cholera, these authorities would have hastened to publish it. The failure to do this argues the existence in Paris of cholera in the opinion of the commission. Later advices may give us satisfactory reasons for the suppression of the official report not inconsistent with the theory that cholera does not exist in Paris.

Whatever may be the exact facts with reference to Paris, it behooves the sanitary authorities of this country to be on the alert, and to put their house in order. In every large city there are many nuisances which receive too little attention, but which in times of epidemic become very hot-beds of disease; of this character are cow-stables, filthy and stagnant pools, privy-vaults, etc. If cholera does not reach us this year it may the next, and twelve months is not too much time to prepare for it.

CHICAGO AND THE WORLD'S FAIR.

The existence of cholera in the United States either this year or next would prove disastrous to the World's Fair. This result would be fatal if the impression became general that the water supply of Chicago was infected, no matter what the facts might be. The prevalence of typhoid in Chicago is already a matter of general knowledge, and its connection with impure water has been stated over and over again in the medical journals. The *Journal of the American Medical Association*, which is published in Chicago, says in its issue of July 23d: "That it should be necessary, month after month, to boil and filter every pint of water that is used for drinking purposes in a city of more than a million of inhabitants is a scandal of monumental proportions upon the city government." A friend who passed the last year in Chicago informs us that the water left standing in pitchers over night is so offensive that it cannot be used. The failure of Congress to pass an appropriation would not have been so serious a blow by half to the success of the Fair as the continuance of the present condition of the city's water supply.

PROCEEDINGS OF SOCIETIES.

BROOKLYN SURGICAL SOCIETY.

Sixty-fifth regular meeting, January 21, 1892. Dr. Jarvis S. Wight, Chairman *pro tem.*

SCIENTIFIC BUSINESS.

Dr. Fowler presented a case of "Aneurismal Tumor of the Ear." After discussion of the paper, Dr. Pilcher presented a specimen of papillomatous cyst of the broad ligament.

Dr. PILCHER:—It is not very often that we have an opportunity of seeing certain growths in their early history. The symptoms provoked are so slight that they are allowed to pass on until the growths become so large as to either produce serious pressure effects or decided pain directly or indirectly.

About six weeks ago a patient was sent to our Methodist Hospital, who was supposed to have some pelvic disturbance of a vague character; she simply suffered from an uneasiness upon being upon her feet. Upon examination the physician found there was some intra-pelvic enlargement and he sent her into the hospital, and she came under my care. Upon examination there seemed to be, upon the right side, in the right broad ligament, and apparently connected with the right Fallopian tube, an enlargement, painless, movable, and having no fever connected with it, no general reaction or disturbance of any kind. As long as the patient remained in bed she was perfectly comfortable. After remaining in the hospital for a week or two, finding she was so comfortable, she was hardly willing to admit that anything was the matter with her, and wanted to go home, and she was permitted to do so. Within two or three weeks she came back, saying she was satisfied there was something the matter, and upon examination the same condition of affairs within the pelvis was again detected, and we advised her that she should be submitted to laparotomy, my provisional diagnosis being (and all my diagnoses in regard to pelvic disturbances are provisional), my provisional diagnosis being that we had a hydrosalpinx to deal with. Yesterday we opened the abdomen as for an ordinary operation upon the tubes, and the finger passed into the pelvis detected the condition of affairs there, which had before been demonstrated from vaginal examination. There was a growth in the broad ligament contiguous to the Fallopian tube, bound down by adhesions, into the posterior cul-de-sac ; it was an elastic mass, apparently, filled with fluid. I succeeded in enucleating it and finally delivered this small tumor, which I now present.

Upon incising the mass, in order to see what was in it, there gushed out a mass of grumous blood, and upon turning the sac inside out there was presented a surface upon which at points were well-developed papillomatous growths. It was a small papilloma of the broad ligament that we had to do with. There has been considerable difference of opinion among those who have given any attention to these papillomatous cysts, as to whether it was possible for them to arise from tissue other than ovarian. I am inclined to think from my own reading that they may arise from either the ovary or from the parovarium.

Sixty-sixth regular meeting, February 4, 1892. Dr. Wight, Chairman *pro tem.*

SCIENTIFIC BUSINESS.

Dr. Lewis read the paper of the evening, entitled "Another Contribution to Cerebral Surgery." (Page 333.) This paper was discussed by members present. Dr. Bogart presented a specimen of recurrent carcinoma of the breast in which at the operation the entire pectoralis major was removed.

Sixty-seventh regular meeting, February 18, 1892. Dr. Burge, Chairman *pro tem.*

SCIENTIFIC BUSINESS.

Dr. Rogers read the paper of the evening, entitled "Report of a Case of Fracture of the Pelvis; Development of Pelvic Abscess; Perineal Section; Recovery." Dr. Fowler presented a uterus the seat of carcinoma, removed by vaginal hysterectomy.

Sixty-eighth regular meeting, March 3, 1892. President, Dr. Rand, in the chair.

SCIENTIFIC BUSINESS.

Dr. Pilcher read a paper entitled "Myoma Uteri Complicating Pregnancy." (Page 489.)

Dr. Wackerhagen presented the following history of a case of interstitial fibroid:

Mrs. S., æt. thirty-eight, mother of three children, last child still-born at the seventh month of pregnancy.

In March, 1887, the lady came under my care for suppurative inflammation of vagina and uterus. At this time I noticed a small round tumor about half an inch in diameter, situated in the posterior lip and cervix; advised its removal after recovery from purulent discharge, but patient objected to an operation.

January 4, 1889, she was delivered of a poorly-nourished child at the seventh month. At this time the tumor had only slightly increased in size. I did not attend the patient for uterine trouble until June 24, 1891, when I was called in consultation at Lake Hopatcong, where the family were spending the summer. I found her suffering from suppurative inflammation of bladder and vagina, also considerable discharge of pus from the uterus. Patient was at this time in the sixth month of pregnancy.

Mrs. S. continued under treatment of local physician and was afterwards informed that the pain from cystitis and inflammation of surrounding parts was so intense that she aborted in July of a still-born infant.

At the time of my visit I noticed the great increase in the size of the tumor. Patient returned to Brooklyn in September last; pus still continued to discharge from the uterus. Under uterine douches applied daily, the discharge gradually ceased and entirely disappeared so that the tumor was removed per vaginam on October 25th. There was no abnormal temperature at any time. Patient has been in excellent health since the operation.

DISCUSSION.

Dr. Pilcher:—I think we are very fortunate in having this case presented to us in connection with the subject of the evening. It gives point to the paragraph in which I refer to such cases. Here was a tumor within the pelvis which enlarged so as to produce marked aggravation of the previous sufferings, and brought about extreme pressure effects and was terminated in abortion, and it was susceptible of being removed from the vagina. If this good lady had been willing to have the doctor do what he evidently had in mind, it is among the possibilities that it might have been removed and the pregnancy been uninterfered with, for in these cases of Martin, although the abdominal cavity was opened and the greatly enlarged uterus was exposed and turned out and a large myoma was enucleated and it was sewed up, and all that, one of them still went on to full term, although three aborted. Two died in the abortion, one recovered and the other went on to full term.

Dr. Pilcher presented a specimen of carcinoma of the breast with the following remarks:

Dr. Pilcher:—This is a fresh specimen of not a very rare condition, carcinoma of the breast, removed this afternoon. The very fact of its being so small, with the diseased conditions so diffused, caused me to think it might be of interest enough to present here this evening.

The patient was fifty-two years of age, married, but has never borne any children. About a year since she began to experience pain in her left breast. After a time a distinct lump was perceptible to the touch in the breast; the nipple retracted and the hardness gradually became more apparent. I saw her first in December last, at which time the presence of an infiltration, well-marked, and distinct to the touch in the upper, inner quadrant of the breast was quite distinct. The nipple was strongly retracted, and the integument over it was adherent and drawn in. There was no tendency to breaking down, nor was there any great proliferation. There were no enlarged glands in the axilla perceptible. I advised immediate removal. After some months the patient finally gained courage enough to undergo the operation and it was done to-day.

At the time it was removed the condition was apparently the same as that in which I described it to have been in December last. There has been no apparent extension of the disease, but it was very distinct in all its manifestations.

I removed it, first removing the mass itself, with the whole breast. Upon section of the mass, the hardened form was about the size of a hickory nut, upon one side it extended to the integument and to the nipple, and on the other side it extended to the fibrous capsula covering the pectoralis major muscle. It had not infiltrated the whole breast, but developing where it was it had brought the tissues together from either side, and presented the appearance of a band of new tissue, dense, extremely firm, connected on one side to the pectoral fascia, and on the other side to the integument.

It has been somewhat rare for me to find after so long a history so slight an amount of apparent disease present, and yet one which in its tendencies presented so well marked the characteristics of malignant disease. Recognizing the fact that the pectoral fascia was simply a continuation or a part of the general connective tissue frame work, which was continued in between the interstices of the pectoral major muscle, and knowing that the lymphatics ran in the same direction, I felt that it was necessary in order to give my patient the benefit of what might be considered a fair and reasonable attempt to remove the disease, to remove the whole pectoralis muscle. I think the question of the removal of the grand pectoral muscle together with the mammary gland was referred to in a recent meeting. At all events I did so in this case, removing also the entire contents of the axilla, that is, the axillary fat and glands. One small gland I also present which was the largest gland in the axilla. It is, however, manifestly diseased, and by its presence illustrated the importance of the removal of the axillary contents, even though there is no large gland that is perceptible to the touch from without.

I present the case because of its slow progress, because of its small size, and yet, because of the demonstrated wide diffusion of the disease.

Dr. Wackerhagen:—I would like to ask if the pectoral muscle itself was involved in the disease.

Dr. Pilcher:—I think one ordinarily would have said that the muscular structure was not diseased, but when I came to examine the mass removed I could see that the cut had been through diseased tissue, while on the face of the muscle, the place was quite apparent to the touch as somewhat hardened. If one had dissected off the fascia doubtless as far as the gross appearance was concerned, it would have appeared healthy, yet I am persuaded that enough experience and microscopical examination has demonstrated to us that the diffusion of carcinomatous disease is very much wider than any gross test we can give to it, and that the only safety we can have is in going far beyond the apparent disease, and when any portion of the muscle has become attached, that there is no safety this side of the entire extirpation of the muscle itself.

Dr. Rand:—If any one has had experience with mental derangement following removal of the breast, I should like to hear of it. I have had such a case in the last few weeks, and the patient has not yet recovered. She is a well-preserved woman, eighty-four years of age and went through the operation without any trouble. Complete primary union took place. Only two dressings were applied, the temperature at no time was above 100° and after the second day remained normal throughout; as near a typical course after operation as could be desired, and yet about the sixth or seventh day she presented signs of acute mania, although at times she seems perfectly rational.

Dr. PILCHER:—I never heard of such a case.

Dr. BURGE:—Is it clear that it was the result of the operation rather than the result of a pretty long-continued use of the anæsthetic?

Dr. RAND:—If due to the ether, and she was under it for not more than forty-five minutes, it would have shown itself earlier; there was no sign of mental disturbance until the sixth or seventh day.

Dr. WIGHT:—I have never heard of any such case. I have seen somewhat the contrary result following in the case of a very nervous patient some thirty-five or forty years of age, from whom I removed one breast one year and the other the next year. She became very much better afterwards and less nervous, and even gave birth to a healthy child, although, of course, she could not nurse it. The last operation was three years ago and so far as I know she is cured, her mental and nervous condition were very much better after the last operation.

Sixty-ninth regular meeting, March 17, 1892. President in the chair.

SCIENTIFIC BUSINESS.

Dr. Rand read the "Report of Two Cases of Carcinoma of the Bladder." (Page 356.) Following the reading of the paper Dr. Fowler presented half of a tracheotomy tube which had broken and dropped into the trachea. It was removed by the low operation.

Dr. Rand presented a piece of wax taper which had been ejected from the bladder of a boy.

Dr. Pilcher gave the history of a case of lymphangioma of the groin.

Seventieth regular meeting, April 7, 1892.

SCIENTIFIC BUSINESS.

Presentation of cases.

Dr. Friend presented the following clinical case:

Dr. FRIEND:—This patient came into St. Peter's Hospital in January; he was complaining then of a swelling of his hand which was painful, and an incision into back of hand being made, a good deal of pus came away from it. That was simply kept open and allowed to drain pretty well until it healed up, but there resulted some contraction of the fingers and wrist-joint especially, and while he was there movement in his wrist-joint became more limited, and soon after there followed a dislocation of the ulna and disorganization of the wrist-joint became apparent. He had a good deal of swelling in his fingers and especially in the thumb. I opened the thumb and a very thin fluid came away, after which it healed up. On March 17th I put a plaster-of-Paris bandage on the wrist, and that gave him a good deal of ease. At this time there was no swelling, but two weeks after that there was considerable swelling in all his fingers; the plaster-of-Paris was removed and the swelling went down. The patient is fifty-five years old and has a good family history.

Dr. Rogers:—I think the best thing that can be done for this man is to amputate his hand.

Dr. Friend:—I do not think he will ever have any further use of that hand.

Dr. Delatour:—I certainly agree with the view that the hand is apparently useless. I believe that the disease has already involved the bone to a considerable extent.

Dr. Rand:—I suppose the term osteo-arthritis would cover the ground. It would seem that all the carpal bones are now involved. Whether this was consecutive to the cellulitis or prior to it seems to be a question. I understand that the wrist bones were believed to be normal when he presented himself for treatment.

Dr. Friend:—There was a little cellulitis, but I could not say whether it had gone into the joint or not. There was swelling in the wrist, but it was not as hard as now. He had some movement of the wrist when he came to the hospital. The cellulitis did not extend much into the forearm, it was at the wrist.

It may have been that the suppuration began in the joint itself and extended into the palm. I do not remember of his giving a history of any injury; he does not remember any injury, and complained of very little pain.

Dr. Rand:—I have at present a case of tubercular disease of the knee-joint which was treated for rheumatism for a long time. When I first saw the child there was an abscess pointing at the outer side of the tibia about five inches below the joint. On opening this I found that the shaft of the tibia was not diseased, as might be supposed from the location of the swelling, but that the upper epiphysis of the tibia was involved, and from this and the joint originated the abscess which had pointed at least five inches below the knee. The case before us may have been primarily a suppurative osteo-arthritis of the carpus, extending to the palm subsequently, as Dr. Friend suggests.

As to the treatment, I think ultimately this man will be glad to submit to an amputation; he probably will not, however, until he has gone the round of all the dispensaries. Fixation and ordinary treatment will do nothing except to possibly retard the progress of the disease.

Dr. Delatour:—I have seen a case similar to the one Dr. Rand described, in which an excision on the knee was done, and an abscess was found extending down into the calf, but there was no pointing outside. About three months ago I had a man fifty or sixty years old, in my service at the Norwegian Hospital, who had tubercular disease of the wrist-joint, in which the pointing was at the cleft between the ring and little fingers and on the palmal side of the thumb. There was nothing at first to attract attention to the wrist. As soon as you took hold of it and moved it then a distinct crepitus was felt, and there was no question as to the location of the disease being at the wrist.

Dr. Rogers:—I have here two specimens of urethral calculus. They were removed from Henry V., æt. eighteen, who called at my office July, 1890, with calculus in the urethra, where they had been for several weeks; one was found just within the fossa navicularis, and was removed after enlarging the meatus. The second was found about three inches from the meatus and was extracted with the urethral forceps.

Dr. Friend:—One case always brings another to our thought. I was called to a case one night to draw a man's water, I put in a catheter and the water came away all right. The next morning I found he had passed a calculus about the size of one of those stones. I suppose in that case I had dislodged the calculus and he was enabled to pass it. I was called down the next night to do the same thing, and as the result he passed another. In this way he passed three. The history disclosed that he had done the same thing, two years before that. but at that time he lived in Havana; and he showed me a specimen of the wall of the tank (probably limestone) from which the water which he drank had been drawn. It seems that they store rain-water in a large tank, and I attributed it to the water he drank. They were the same shape as those stones. He was a stone-cutter about thirty-five years of age.

Dr. Rand:—Twice lately in treating long-standing strictures, I have detected on passing an instrument a characteristic grating, and have found this to be due to the presence of calculus material behind the stricture. In both of these cases the grating persisted until the calibre of the stricture was brought up to something like 20° F., when gradually it grew less and less, and finally disappeared, the particles being discharged in the urine. I suppose these cases come under the head of urethral calculi.

EXECUTIVE BUSINESS.

Dr. A. T. Bristow was elected to membership.

Seventy-first regular meeting, April 21, 1892.

SCIENTIFIC BUSINESS.

Dr. Geo. Wackerhagen gave the following: "Report of a Case of Partial Excision of the Wrist-Joint."

In December, 1889, the patient, a male, æt twenty years, complained of pain over the region of the fifth metacarpal bone of the left hand.

The pain and swelling gradually increasing, he was directed to apply for treatment at the dispensary clinic of a public hospital, where ointments and poultices were prescribed.

April 1, 1890, saw the patient in consultation with his physician; as there were indications of necrosis of the fifth metacarpal bone, I advised operation for its extirpation. This operation was performed April 2, 1890; specimen is here presented. There was slight extension of the disease, involving a portion of the unciform bone, removed by application of the curette. The wound healed satisfactorily.

In the latter part of February, 1891, pain and swelling commenced on the outer surface of the wrist-joint, which continued to increase so that an operation for exploration March 10, 1891, ended in the removal of the unciform, cuneiform, os magnum, and semilunar, with the bases of the third and fourth metacarpal bones, also by curetting of the lower ends of the radius and ulna. The diseased bone removed is shown by the coloring in the anatomical specimen presented.

The wound was treated by iodoform-gauze packing, and finally with iodoform ether injections. At the end of three months it was completely healed, with rapid improvement in the usefulness of the hand, as well as marked increase in weight and general improvement in the appearance of the patient.

There is some pain attending forcible adduction of the hand, but this has been gradually decreasing.

You will notice that he has now a very useful hand, with movement at the wrist-joint and with good flexion and extension of all the fingers.

Although it is now more than a year since the last operation, I have not reported this case because there were evidences that the disease of the bones was of tubercular origin, and I wished to have him for some time under observation.

It seemed more desirable to make complete excision in this case, but having had favorable results in the partial excision of tarsal joints, I determined to follow a conservative plan, believing that it is preferable to risk the probability of a secondary operation, unless there is a certainty that by so doing, the usefulness of the limb will be materially interfered with.

As my experience has increased in these cases, I have come to the conclusion that conservative operations are generally to be preferred in all cases where there is a possibility of preserving the usefulness of the joint.

In this case I was censured by my assistants, who were of the opinion that an amputation should be performed. I will say that it is my practice to ask advice from my associates during operations and to allow them free expression of their opinions.

The boy's father also expressed dissatisfaction because the hand was not removed.

Seventy-second regular meeting, May 5, 1892.

SCIENTIFIC BUSINESS.

Dr. Jarvis S. Wight presented a case illustrating the results of osteotomy of the bones of both legs for the relief of anterior curvature of the tibia.

Dr. Wight also read a paper on "Excision of the Knee-Joint." This paper was thoroughly discussed.

EXECUTIVE BUSINESS.

Dr. Walter C. Wood was elected to membership.

H. BEECKMAN DELATOUR,
Secretary.

BROOKLYN DERMATOLOGICAL AND GENITO-URINARY SOCIETY.

Meeting of April 1, 1892.

Dr. S. Sherwell, the President, in the chair.

1. Dr. Winfield presented for diagnosis a case with the following history: J. W., æt. five, family history negative. Patient was first seen November 24, 1891, presenting the following lesions: Purple-red, spider-shaped tubercles in front of the right ear, in the centre of right cheek and on upper and lower right eyelid. On the forehead between the eyebrows was a circular patch resembling very much a lupus erythematosus. The submaxillary, parotid, sublingual and post-cervical glands were also markedly enlarged. Under a tonic treatment they have diminished in size.

Drs. Morton and Holsten regarded the lesions on the cheek and eyelids as being keloids.

Dr. Sherwell considered the lesion on the forehead as a lupus.

2. Dr. Sherwell presented a case of dermatitis herpetiformis in a male infant eleven months of age. The case was first seen March 14th, when an erythemato-vesiculo-bullous eruption was present, sparsely over the trunk, but more profusely over the extremities and especially the lower extremities. This eruption had been present more or less plentifully since the child was three months of age. Intense pruritus was present. The diagnosis of dermatitis herpetiformis was made and an antipruritic lotion prescribed with small doses of hydrag. c. creta. The child was in all respects healthy-looking and well-nourished. On March 31st, it was first noticed that the child had decided phimosis, and an adherent prepuce, and inquiry elicited the fact that it evidently suffered during micturition, rendering the fact of causation of the skin trouble as probably a reflex one. For this reason it was decided to circumcise and the results would be reported at some future meeting.

3. Dr. Morton presented a woman with large "oyster-shell" syphilitic rupia over both elbows and numerous scars of previous ulcerations on the arms.

4. Dr. Holsten presented a man with an initial sclerosis on the tip of fourth finger of left hand, of over a month's duration, and with a macular, papular and pustular eruption over the entire body.

5. Dr. Holsten presented a case of thick, warty patches covering the palm of the right hand and involving the toes and inner

and outer aspect of the heel of the right foot, of over two years' duration, in a syphilitic woman. There were also syphilitic infiltrations around the wrist and ulcerations over the foot and ankle. The warty growths were not regarded as essentially syphilitic, but as hypertrophies which had developed upon a syphilitic and hyperæmic base.

Meeting of May 6, 1892.

Dr. S. Sherwell, the President, in the chair.

1. Dr. Holsten presented a woman with pityriasis maculata et circinata of four weeks' duration, on thighs and legs, and a lighter fading eruption on both forearms. Not any on trunk.

[The case will be published in the BROOKLYN MEDICAL JOURNAL.]

2. Dr. Winfield presented a man with gonorrhœa, who, for four days had been taking a mixture purchased at some drug store, containing copaiba; quantity not known. A copaiba rash was present over the entire body which began three days ago. Yesterday the case was more severe than to-day and more urticarial in its character, the face being swollen and the eyes partly closed.

3. Dr. Sherwell presented a man with patches of psoriasis on both elbows and knees, patches of seborrhœic eczema on the chest, between the shoulder-blades, on the face and on the scalp, and a universal eruption of a roseola character. There were also flat condylomata around the anus. Congestion of throat. No syphilitic history. An initial lesion had not been found and the patient denies having had intercourse for over seven months. No adenopathy ten days ago, but some in the inguinal region now. Dr. Sherwell regarded the roseola as syphilitic.

4. Dr. Morton presented a man who had had two attacks of pneumonia during the past year, on both of which occasions poultices had been applied to the chest, for twelve days during the first attack and thirteen days during the second. The entire chest was studded with papules surrounding the sebaceous openings, some of normal color, others inflamed, many containing plugs of sebum, and some were suppurating. He had first thought it a case of acne cachectocorum, but further observation convinced him it was only a case of excessive milia and comedones with acne. He hardly thought the poultices were a factor in the production of the disease as they were used nearly a year ago and this had only existed for three months. The patient also had a deposit in the right apex, and the question arose whether there might not be some connection between the tuberculosis and the comedones. He had seen

patients with tuberculosis where there were many acne papules on the back and chest, and as a matter of clinical experience had thought the acne might bear some relation to the concomitant symptoms of wasting, sweating, etc. The treatment in this case would be at first frictions with green soap.

5. Dr. Sheldon presented for diagnosis a colored man, æt. fifty-four, married. Two-and-a-half months ago a papule appeared on the foreskin, lasted about a week, then passed away, and since then others have come; each papule terminated in suppuration. His wife has some leucorrhœal discharge.

Dr. Morton thought the leucorrhœal discharge, if acrid, was the probable primary cause, and invasion of pyogenic cocci and auto-inoculation the secondary cause of the lesions, with which view the other members agreed.

6. Dr. Sherwell reported that the case of dermatitis herpetiformis shown at the last meeting had been circumcised on April 8th, and extensive, almost complete adherence of prepuce to glans had been found. The case steadily and rapidly improved, so that by the 21st the child was approximately well, no pruritus being left. The former treatment had not been in any way altered.

7. Dr. Holsten read a paper on "Some Recent Investigations Regarding the Fungus of Favus," and exhibited culture-tubes containing three varieties of favus which had lately been discovered in Unna's laboratory in Hamburg. Microscopical preparations were also shown.

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SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital, and to the Methodist Episcopal Hospital, Brooklyn.

CORNUTIN IN HÆMATURIA.

A. Mievels (Pester med.-chir. Presse, No. 39, p. 921). M. administers, with the happiest effect in this class of cases, whether of urethral or vesical origin, cornutin in doses of 1-100 of a grain. The rationale of its action seems to depend upon its power of producing contraction of the vessel walls as well as of the muscular apparatus of the genito-urinary tract.

TREATMENT OF VARICOSE ULCERS OF THE LEG.

Fejer (Pester med.-chir. Presse, 1891, No. 44). The essential points in F.'s method consist in: 1st. Thorough cauterization of the entire ulcerated surface. 2d. After separation of the resulting crust the parts are lightly dusted with iodoform and strapped with mercurial plaster. 3d. Slight massage daily through the dressings. Patients may resume their occupation after the first few days, but are enjoined to place the feet in an elevated position when not actually engaged at work. In case of larger ulcers a circumscribing incision is made. F. does not advise skin transplantation, claiming that equally good results may be obtained by the above treatment. After healing the use of a silk elastic stocking is recommended.

SUB-HYOID PHARYNGOTOMY.

Aplavin (Archiv für klinische Chirurg., vol. xli., p. 324, 336). This operation as originally performed by Malgargrin and von Langenbeck gave but a limited amount of room for the field of operation. Kuester and Iversen modified this by adding a longitudinal incision along the anterior edge of the sterno-mastoid. This is objectionable from the fact that it separates both branches of the superior laryngeal nerve. A. operated as follows: Commencing with the transverse incision of von Langenbeck, he separated the cornua of the hyoid bone for two ctm. from their free ends. The lower edge of the wound can now be retracted downward and backward, and the upper or glottic opening of the larynx can be displaced to either one or the other side as occasion may require in the course of the operation. In this manner ocular inspection of all parts can be obtained, as well as their manipulation facilitated.

SURGICAL TREATMENT OF BILIARY CALCULI, ETC.

Ignatow (Centralblatt für Chirurgie, No. 9, p. 180). Basing his conclusions upon a critical study of 278 cases of operative interference in affections of the gall-bladder, I. comes to the following conclusions: 1st. Interference is demanded in all cases in which the paroxysms of pain are such as to suggest obstruction of cystic or common duct. 2d. Cholecystotomy is to be considered as the typical operation. 3d. This procedure and cholecystectomy as well offer the lowest rate of mortality. 4th. In all inveterate cases the walls of the gall-bladder, more or less, undergo pathological changes. Normal cholecystotomy is recommended in this class of cases. 5th. Cholecystectomy, inasmuch as it does not affect the formation of the gall-stones cannot be regarded as a radical treatment, therefore, it should be restricted in its employment to malignant disease of the gall-bladder and well-defined obstruction of the cystic duct. 6th. Ideal cholecystotomy should always be employed in recent cases. Statistics do not support the generally received notion that this procedure is fraught with danger. 7th. Cholecystenterostomy is to be reserved for cases in which malignant disease being excluded, a well-defined obstruction of the common duct is present.

INTRA-GLANDULAR ENUCLEATION OF THYROID TUMORS.

Poffert (Deutsche med. Wochenschrift, No. 52). P. describes Bosės procedure as follows: The anterior face of the tumor is bared by reflecting a flap and the connective tissue surrounding the capsule is loosened so that the tumor itself is relatively free. An elastic ligature is then passed around the growth, tightening down upon the parts situated posteriorly to the growth as soon as the loop of the ligature has passed beyond the greatest diameter of the growth. In this manner the blood supply is entirely shut off. The nodules and cysts constituting the thyroid tumor may now be attacked and removed piecemeal. The tissue remaining, if any, will be found not as vascular as one would suppose, and hæmorrhage is controlled by pressure, and perhaps ligature of a few vessels. In cases in which the growth involves the isthmus this must be severed and ligated before a pedicle for the application of the elastic ligature can be obtained. Not infrequently it will be found that the tumor is so strongly adherent as to necessitate removal *en masse* with or without preliminary ligature of the superior and inferior thyroid arteries of the respective sides.

PROGRESS IN MEDICINE.

OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children, and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief to the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

EXTRA-UTERINE PREGNANCY AND RETRO-UTERINE HÆMATOCELE.

Zweifel (Archives f. Gyn., B. xli., H. 1 and 2) discusses the points of interest in thirteen cases of extra-uterine pregnancy. One case presented the following anatomical peculiarities. The fœtal sac was situated at the right of the uterus and was adherent to the surrounding viscera. The ovary and tube were found between the sac and the uterus. The abdominal extremity of the tube rested on the ovum. The lower aspect only of the fimbriated end of the tube forming part of the cyst wall. Neither ovum, placenta nor membranes were found within the tube. The sac wall contained smooth muscular fibre which Z. believed to have been derived from the retro-peritoneal musculature. Tubal epithelium was found in portions of the cyst wall. The case was regarded as one of intra-ligamentous pregnancy.

In another case the placenta was removed without hæmorrhage. The decidual cast had been expelled three months before operation.

Two cases recovered after simple removal of the uterine adnexa. In three cases tubal abortion occurred with consecutive hæmatocele. In five cases hæmorrhage took place from tubal rupture. In one instance the diagnosis was made only after death of the patient. In six of the cases the hæmorrhage was limited. Elytrotomy was done three times. Twice abdominal drainage was practiced on account of hæmatocele. Of the three cases operated by the vagina one was lost. In another the abdomen had to be opened subsequently for complete removal of clots. A point of interest in this case was the presence of a retro-uterine hæmatocele which had been taken as evidence of the death of the fœtus, Elytrotomy was done. Profuse hæmorrhage occurred from incision of the placenta. The abdomen was then opened. So extensive were the adhesions that the removal of the fœtal sac was impracticable.

The sac contained a living fœtus of five months development. Violent hæmorrhage occurred in spite of the fact that the placenta was left undisturbed. The sac was packed with iodoform-gauze, closed and drained through the vagina. Secondary hæmorrhage repeatedly occurred, and the patient died of purulent peritonitis on the sixth day after operation. The author advises in similar cases the rapid removal of the placenta, packing and closure of the sac after tying the ovarian vessels, together with compression of the aorta. In the absence of placental hæmorrhage or fever he would close the sac with the placenta *in situ*. Z. would await the death of the child before operating. In two cases in which the fœtus had long been dead he left the placenta on account of extensive adhesions of the sac. In one of the cases the placenta sloughed away, the wound closing only after seventy-two days.

TREATMENT OF SYNCOPE FROM CHLOROFORM NARCOSIS.

Maas (Berlin. klin. Woch., March, 1892) advocates intermittent compression of the cardiac region, after Konig, in the treatment of chloroform syncope. He, however, modifies the technique as follows: The operator stands on the left of the patient facing the head. Placing his right hand upon the præcordium he applies the compression by rapid and forcible thrusts at the rate of not less than 120 per minute. The procedure is more effective if the left hand at the same time grasps the opposite side of the chest. An assistant standing at the patient's head keeps the air-passages open. Improvement in the patient's condition is recognized by watching the carotid pulse and by the contraction of the pupil. The operator's efforts may be suspended after the pupil has become normally contracted and so remains and spontaneous respiration has been permanently resumed. This may not occur for one or two hours. Cases have been resuscitated by this method in which the pupils had ceased to react, the eyeballs were flaccid, the face corpse-like and both respiration and pulse were absent.

PUERPERAL TETANUS AFTER ABORTION.

Vinay (Brit. Med. Jour., April 9, 1892) reports a case of this rare complication which occurred last autumn in the practice of a medical man in Paris. The patient was a IV. para, æt. thirty-six. On November 10, 1891, when in the second month of pregnancy, uterine hæmorrhages set in, and abortion took place unobserved in the course of these attacks. No tampon was applied. The lochia became fœtid, there was hypogastric pain, and it was deemed necessary to use the curette. The operation was done on Nov.

17th under chloroform. Some putrid membrane was removed, and the endometrium was scraped and carefully washed. One hour later a rigor occurred. On the night of Nov. 19th a stiffness began to be felt in the region of the masseters, then trismus rapidly followed by pharyngeal spasm. In the course of the 20th, the most pronounced tetanus developed. During the attacks emprosthotonos instead of opisthotonos occurred, the head and trunk being violently bent forwards. On the morning of the 21st, the attacks were very frequent and severe, and the patient died thirty-six hours after the appearance of the first symptoms. She was conscious throughout, the pulse did not exceed 108, nor the vaginal temperature 99.8°. Vinay has collected 106 cases of puerperal tetanus. The recoveries amounted only to 12; 59 occurred in labors at term, 7 recovering, and 47 in abortions, 5 recovering. Hence the total mortality is 88.67 per cent., or higher than in any form of surgical tetanus, excepting in cases of wounds on the battlefield where the mortality is as follows: In tetanus after wounds of the head and neck, 95.2 per cent.; after wounds of the lower extremity, 89.7 per cent.; after wounds of upper extremity, 86.3 per cent. Relapses after one attack of puerperal tetanus have always proved fatal, hence the necessity of prolonged rest in bed when the patient has recovered from tetanus. The disease is as deadly when it sets in late as when it occurs within a day or two of labor. The only treatment which has afforded distinctly good results is inhalation of chloroform carefully maintained for several hours, or large doses of chloral (fifteen grains) hourly, with narcotization when the attacks of spasm sets in. Localized tetanus of the uterus is a disease completely distinct from puerperal tetanus.

TRANSFUSION OF SALT SOLUTION INTO PERITONEAL CAVITY IN COLLAPSE.

Alloway (Montreal Med. Jour., Feb., 1892). This procedure is of no less interest to the obstetrician than to the general surgeon. A. removed the ovaries of a woman, æt. forty-two. They were non-adherent, nodular, and about the size and shape of a human kidney, of stony hardness and attached to the uterus by a short pedicle. Three gallons of a dark brown limped fluid flowed away from the peritoneal cavity. There was evidence of secondary deposit in the mesenteric glands and elsewhere. Eight hours later the patient was pulseless, restless, sighing and unconscious. The shallow respiration became gasping. Alloway believed that this condition was probably due to the sudden withdrawal of a quantity of fluid, which had removed firm and constant pressure from the heart and large abdominal vessels. He accordingly transfused about three quarts of sterilized salt solution (temperature 110°) into the abdominal cavity through the glass drainage-tube inserted at the operation. The patient immediately began to scream and vomit violently. The tube was removed and the opening closed by a firm packing of cotton. In about five minutes the radial pulse became full. Some hours later the abdomen was as flat as when the woman left the operating table. The highest temperature (second day) was 101.5°. The patient left the hospital at the end of four weeks. Dr. A. believes that peritoneal transfusion, on account of its rapidity of action, is preferable to hypodermic injection or enemata of salt solution.

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GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

UTERINE FIBROIDS.

Homans, of Boston, before the American Medical Association, defines uterine fibroids as aggregations of normal uterine tissues in abnormal situations and masses. Operations are rarely necessary. He had operated on eleven per cent. in 520 cases.

Among the indications for operations are hæmorrhage when it threatens life, when unbearable from weight, when they cause serious pain, and interfere with the digestion or circulation, obstruction of bowels, or when the pedicle becomes twisted. Death by hæmorrhage is rare.

He had met with eight cases of fibro-cystic growth, less than two-and-a-half per cent. of cases, and none were removed successfully. The natural history of ninety per cent. of cases is to remain stationary, after reaching a certain size, and after the menopause to undergo atrophy or become cretaceous. Treatment by ergot is usually ineffective. High doses of electricity may stop hæmorrhage, usually relieves pain, but infrequently diminishes their size.

Curetting often cures the hæmorrhages.

PALLIATIVE TREATMENT OF CARCINOMA UTERI WITH ALCOHOL.

Schultze (Wien. med. Blatt. Jahr., No. 14) reports results in ten cases which were highly satisfactory, his treatment being based upon the recognized local effect of alcohol, it being injected into the diseased structures.

A typical case with typical symptoms of a patient, forty years, is given, who had suffered from carcinoma for a year. She was profoundly cachectic and had carcinomatous lesions of os and portions of vaginal wall.

The needle of a syringe holding ʒ ss. was driven from one to one-and-a-half inch into the diseased mass, and after its use the vagina was packed with iodoform-gauze and removed the following day. Usually one, but sometimes two injections were used at a time.

The pains became less marked after some ten or twelve injections, and the granulations were healthier. After twenty injections the new growth was diminished over one-half in size and had the appearance of a healthy ulcer; the discharge was without odor and there was absence of hæmorrhage. The patient's general condition improved, was well nourished and slept. Forty-five injections were made, and the treatment was discontinued. Six weeks subsequently felt entirely well, bleeding and discharge had ceased, and the os was entirely covered with epithelium. After another period of four months the patient's condition was altogether satisfactory. The second case was treated with forty-eight injections with similar improvement. Eight other cases were yet under treatment.

The injections are always made with patient in Sims' position and a Sims' speculum, the urethra being protected by cotton. Absolute alcohol was employed, at first ʒ iss., afterwards ʒ ii.

At the commencement, injections were made at an interval of some days and later daily.

Many patients complained of considerable pain, especially if the needle was deeply inserted. It was observed most of the alcohol flowed out carrying with it broken down tissue, and at times large necrotic masses were separated from their surroundings.

S. believes this method gives hope to those patients who have passed the period for successful operation.

ICHTHYOL IN INFLAMMATORY AFFECTIONS OF THE GENERATIVE ORGANS.

Niemirowsky (Internationale klinische Rundschau, No. 3, 1892) obtained particularly favorable results with ichthyol in chronic peri- and parametritis, in oöphoritis and even in obstinate cases of adhesions of the uterus and of pelvic exudations.

The remedy did not give satisfaction in salpingitis, endometritis nor in erosions.

In metritis the tissues were softened by it.

The author employs a tampon soaked in a ten per cent. solution of ichthyol in glycerine. He inserts it through Ferguson's speculum and leaves it in the vagina for twenty-four hours. After its removal he orders two warm vaginal injections during the day. On the following day he inserts a tampon, and so continues to alternate injections and tamponing.

Beside stimulating absorption, ichthyol acts eminently as an anodyne. The second tampon is often followed by considerable relief from pain.

THE USE OF IODOFORM-TANNIN GAUZE AND OF BROTANNIN.

Gregoriontz (Annales de gynécologie d'obstetrique, Mch., 1892) says he has used for peri-uterine exudation iodoform tannin applied by bag tampons. In one case the exudation appeared in two months and at the end of a year no trace of the inflammatory product could be found.

Inflammatory thickenings about the ovaries also quickly disappeared under this treatment. He also observed rapid diminution in ovaries two or three times their usual size which had become very painful at menstruation.

G. had also been in the habit of using bags of borate of tannin applied to cervix in cases of hæmorrhage, with excellent results.

CHILDREN AND THEIR DISEASES.

BY FRANCIS HART STUART, A.M., M.D.

PRIMARY DENTITION IN ITS RELATION TO RICKETS.

Dr. Carpenter and Mr. Pedley (Lancet, May 14, 1892) state that "there is a widespread belief among medical men that the temporary teeth are materially affected in children who are rickety, and as a result of this disorder." They quote the opinions of various writers, and then give the results of an examination of five hundred children "with obvious rickets, and find, as we anticipated, the results are not confirmatory of the prevalent ideas on this subject. Briefly tabulated, these results are as follows: *a.* In the vast majority of patients the teeth are perfect in structure. There is no deficiency of enamel. The teeth do not become loose, and rapidly fall out. There is no special proneness to decay. *b.* In those rare cases where the teeth have been found defective a history of inherited syphilis has been obtained. *c.* Dentition is undoubtedly delayed.

"The result we have obtained under the heading *c* is then quite in accord with the writers quoted, as also with the prevalent opinion, whilst widely differing from them in other respects. Bland Sutton has made the suggestion that the delay is caused 'by abnormal thickness of the follicles.' By the end of the seventeenth week of fœtal life the dentine is in process of calcification, and about the same time a deposit of enamel commences in the enamel organ. From this time forward the process is a continuous one, so that at birth parts of the crown of the teeth are fully formed, and the course is complete, as regards the crowns, between the third and fourth month after birth. It is still then a disputed point whether the enamel has received its full impregnation of salts. Of late years it has been recognized by various observers that rickets may commence *in utero*, and in such instances as these some modifications in structure of the upper parts of the crowns of the teeth might be looked for, as is the case in congenital syphilis. Again, the presence of this disorder at birth, soon after, and up to the third and fourth month, should, on an assumption, bring about some defect of the lower portions of the crowns of the teeth, *i.e.*, near the neck. Following Kassowitz, the earliest indications of rickets are either trifling bending of the rib costo-chondral junctions, or carnio-tabes, or a combination of these. He considers that at least eighty per cent. of children in Vienna under three years of age are rickety. On the question of some trifling bending of the ribs amongst the children of the London poor, we should be prepared to go much farther than he does, and say that in a large out-patient experience we have never yet failed to make out some slight bossing in this situation in the youngest infants; and that, if this is to be taken as sufficient evidence of rickets, then the disease is nearly ever present in the out-patient room to some extent. A very large number of children must therefore, be slightly rachitic during the period of the formation of the enamel of the lower half of the crowns of the teeth, *i.e.*, the cervical part.

"On the question of carnio-tabes, however, we hold somewhat different views, and consider that congenital syphilis is largely responsible for this condition of affairs. Moreover, in comparison with the heads on the ribs, it is of infrequent occurrence. Given, then, that this bending of the ribs, to however slight an extent present, and seeing, also, how prevalent this condition is in the out-patient, it would have been expected, if rickets is such a potent factor as the text-books state, that some dental alteration in the shape of enamel scarring would have been detected in a considerable proportion of these cases, yet the contrary has been our experience. We have over and over again watched the teeth-cutting in obviously rickety children—children who have been attending as out-patients for weeks,—yet our observations have not been rewarded in the eruption of pitted and defective enamel; on the contrary, it has appeared to be quite perfect.

"It must not be inferred that because a history of syphilis has been observed we consider such teeth syphilitic. Whilst not holding with Parrot that rickets is a syphilitic manifestation, yet in our experience, as doubtless in that of many others, the syphilitic cachexia when present is a very powerful agent in the production of rickets. In a large number of rickety children a syphilitic history can be obtained if inquired for, and the observer is not infrequently startled by the appearance in some such cases of a slight syphilitic rash on the buttocks, anal condylomata, a specific ulcer in the mouth, eye trouble, or what not, in a child who, for all the signs that were present at the time of the first examination, would otherwise have passed as rickety merely. These signs showed that the disease was smouldering on, and that the syphilitic cachexia was underlying the rickety trouble. On this account, therefore, we cannot attach that importance to the heading *b* which we might otherwise have done. What we do say, however, is that it is not proven that rickets is responsible for all the dental troubles that have been laid to its charge; that the association of rickets with carious teeth as between cause and effect is merely an assumption; and that caries does not take place in any case in rickety children to anything like the extent the text-books would lead us to infer. What is wanted is some more extended and definite observations on this interesting point, and not statements which go the rounds of the various medical books in somewhat different dress, quite unchallenged and accepted as truisms."

DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

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THE CANAL OF JACOBSON, ITS RECOGNITION DURING LIFE, AND ITS RÔLE IN THE PATHOGENESIS OF LESIONS OF NASAL SEPTUM.

Dr. Potiquet (Journal Laryngol. and Rhinol., vol. vi., No. 3). This canal in the human nose is rudimentary, but in certain mammals is well developed.

In the nose of the sheep it consists of a muco-membranous tube surrounded by the cartilage of the nose and inclosing branches of the olfactory nerve.

In man the covering of cartilage consists merely of a few thin plates called the cartilages of Jacobson, situated at the junction of the quadrilateral cartilage and the anterior angle of the vomer. The canal itself lies above these cartilages of Jacobson, and is a short cul-de-sac. In adult and aged persons it is often difficult to detect the location of the canal, but in the newly born it can be discerned at extremity of a short furrow and surrounded by a slight cushion. Chronic inflammatory lesions may completely obliterate it.

Kölliker has defined the situation of this canal as 8.5 mm. above the floor of the inferior meatus, 24 mm. behind the angle formed by the membranous septum and the upper lip. Its diameter is 1 mm., and its depth from 4 mm. to 8 mm. Its height above the floor of the nasal septum is quite constant, but the other measurements are more variable.

The best light with which to search for the orifice of this canal is the sun, and the nostril should be dilated so that the rays may strike the surface of the septum as nearly perpendicular as possible. This canal is probably of pathological importance, certainly morbid processes are very frequent at this portion of the septum. These occur most after ulcerative syphilides, perforating ulcers, recurrent epistaxis, lupoid neoplasms, nodules of leprosy and perforating ulcers of typhoid fever. No cause has yet been assigned explanatory of the frequency of pathological processes in this location. The septum is most thin at this point, but that fact would not explain why morbid action begins at that point so often.

The nasal cavities contain, even during state of health an enormous quantity of cocci, and is possible that ulcerations and other morbid processes may result from penetration of this canal by staphylococcus and streptococcus pyogenes, which cause necrosis of the mucous membrane.

CYSTS OF TONSILS, NOSE AND LARYNX.

P. McBride (Brit. Med. Jour., May 14, 1892). Differentiation must be made between true cysts of tonsil, which have a covering of mucous membrane, showing minute blood-vessels ramifying on the surface, and the cheesy accumulations so frequently seen protruding from orifices of tonsillar crypts.

True retention cysts have been most frequently observed in females. They cause no pain and on puncture exude a cream-like fluid having no bad odor or taste. These cysts were originally crypts, their orifices closed by inflammatory action and contents consisting of mucous, desquamated epithelium and leucocytes. Nasal cysts are rare. These may occur beneath inferior turbinated bodies, containing one or two drachms of clear straw-colored serum. Another variety is found springing from the middle turbinated bodies. These cavities often contain air, appearing in both nostrils, and expanding sufficiently to cause nasal obstruction and neuralgic pains. They have osseous walls and seem to be incorporated into body of turbinated bones. Cystic growths in larynx are of common occurrence, they may spring from any part of larynx, the vocal bands being occasionally their site. They can be removed by means of Mackenzie's forceps, for although of rapid growth these neoplasms are entirely benign in their character.

[The air-cavity cysts of the nose, referred to, are explained by Dr. Chas. H. Knight, as being the result of a marked curvature of middle turbinated bones, the free extremity curling over until it touches its base, and finally uniting to it. If these cysts be amputated by means of snare, the mucous membrane lining cavity will be found covered with ciliated epithelium, thus vindicating this theory of the origin of the cyst.—D.]

BACTERIOLOGY.

BY B. MEADE BOLTON, M.D.,

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ACQUIRED IMMUNITY AND PRODUCTION OF PROOF AGAINST POISON.

Behring (Zeitschrift für Hygiene, etc., Bd. 12, Heft. 1) tested the blood-serum of animals protected against diphtheria and tetanus. His experiments from the start were based upon the idea that changes occur in the non-living parts of the blood (in accord with the view of Nuttall, Buchner and others), and not in the cells (Virchow, Metschnikoff) in animals which have an acquired immunity. Moreover, this change in the blood is not necessarily a faculty of killing the bacteria, but it is a power of destroying bacterial products. It is possible to protect a susceptible animal in such a way that a disease-producing organism can grow in the animal without producing disease, the products of the growth being rendered inert by injections of the blood-serum of an animal which has been rendered immune. The possibility of thus making an animal poison-proof against bacterial products is also exemplified by the beneficial action of iodoform in many cases. Iodoform is comparatively weak as a germicide, but is powerful in neutralizing the action of the products of growth of the pyogenic bacteria.

All animals which enjoy immunity furnish blood, which even when drawn, has bacteriacidal properties. and on the other hand no susceptible animals furnish blood of this kind. These facts. it is true, are only proven for the vibro of Metschnikoff in animals artificially protected. Constant relationship between the character of the blood and immunity is only found in acquired immunity and not with inherited An animal to be properly protected should have the power of destroying the poisonous products of the bacteria; otherwise the disease might be produced by inoculation of bacterial products even though the bacteria could not grow in them. And again it was found possible to protect animals against tetanus (Kitasato,) and diphtheria even though the bacteria grew in the tissues of such animals. This can only be accomplished with certain chemicals, *e.g.*, trichloride of iodine or the chloride of gold and sodium. Blood-serum from animals protected in this way does not kill the bacteria, but renders the products of the bacteria inert. Injections of blood-serum of this sort gave very striking results. So there is no longer any doubt but that the immunity-substance is contained in the blood-serum, and the strength of the power of the immunity-substance is in direct proportion to the degree of immunity which the animal furnishing the serum has acquired. The more susceptible the animal is by nature, and the greater the resisting power it has acquired the more powerful its serum.

The knowledge of immunity which has been gathered may be summed up as follows :

There is no generally applicable explanation of the way in which inherited immunity comes about. For artificially produced immunity a series of carefully studied infections the explanation is so far advanced that we can attribute it with certainty to a property of the blood; and, indeed, to the blood deprived of its cells. But in no diseases has any one found the absence of an immunity-substance in the extra-vascular blood of very susceptible animals which had been given a sufficiently high degree of immunity.

Behring and Wernicke (Ibid.) made experiments on the immunity and cure of diphtheria in animals. They find diphtheria is not always even primarily a local affection, *i.e.*, the organisms are not always confined to the throat. In one case they found the bacilli in all the organs and tissues of a child. In every case, even where the bacteria are localized, diphtheria must be regarded as a general disease, for sooner or later, except where syncope sets in, the whole system becomes poisoned. The possibility of neutralizing this poison became evident as soon as it was observed that certain elements in the blood counteracted the diphtheria poison in animals. That blood-serum, *i.e.*, blood deprived of its cellular elements is capable of rendering the cause of disease harmless, whether by destroying the organisms themselves or their products.

A large number of animals which are naturally insusceptible were tried, but blood from these was inert. The first positive results were obtained by using blood of guinea-pigs which had been inoculated and treated locally soon after inoculation with trichloride of iodine or the chloride of gold and sodium. Animals treated with this serum were somewhat protected. They lived longer after inoculation with virulent cultures than animals not so treated, and the greater the degree of immunity obtained in the animal from which the serum was obtained the more powerful the protective power of the blood. So it became a problem to make animals from which the serum was to be obtained more strongly resistant. A number of interesting methods for this purpose were found, but the method finally adopted as the best is to treat cultures of virulent organisms with trichloride of iodine before inoculating. Large amounts of virulent cultures of diphtheria bacilli were filtered through paper till the filtrate was clear, then carbolic acid was added, so that the culture contained one-half of one per cent. of the acid to preserve the culture. This mixture remained virulent at least nine months. To this was added varying amounts of trichloride of iodine in the proportion of 1.250 up to 1.600 and allowed to stand 24 to 36 hours before inoculating guinea-pigs.

Another method is to use diphtheria cultures or poison and administer it in increasing doses by the mouth, beginning with a dose several times greater than would be necessary to kill hypodermatically. The doses are carefully regulated and must cease as soon as any symptoms of disease appear, and only continued after the animal has completely recovered. Still another way is to take the calcium precipitate and dry and pulverize it and beat it at 77° C. for an hour. Calcium chloride is used to precipitate with, according to the method of Roux and Yersin. In inoculating rabbits with this the animals have a phlegmonous erysipelas which heals in about eight days. If these rabbits are inoculated again in another eight days after the erysipelas disappears no reaction follows. Such animals bear very large doses of virulent material and their blood is very potent in curing and protecting other animals. Any animal can be used provided it is susceptible in the beginning and has acquired a high grade of immunity. This serum can be preserved indefinitely by the addition of carbolic acid up to one-half of one per cent. It is proven that the serum contains the immunity-substance because the serum deprived of the corpuscles is more powerful than the blood itself. Blood-clot has only weak power.

More serum is required to cure the diseases after the animal has become infected than is necessary to protect an uninfected animal. Guinea-pigs infected with a culture that is sure to kill in three or four days require one-and-one-half to two times as much serum directly after infection as guinea-pigs uninfected; eight hours after infection they require three times as much; twenty-four to thirty-six hours up to eight times as much. If an animal has been protected by an injection of protective serum its power of resistance increases if it is inoculated subsequently with a virulent culture. The best place to inject is in the peritoneal cavity.

The practical difficulty just now in using the method on children is that it would take too large an amount of serum. With the most potent serum yet obtained it would take fifty cubic centimetres for a child weighing forty pounds for the first injection and probably as much more for subsequent injections after the disappearance of all symptoms.

Summary.—Guinea-pigs which received certain preliminary treatment (described above) do not react to inoculation of a dose of diphtheria poison which would otherwise be certainly fatal. The blood of two of these animals cured with certainty and smoothly other animals.

Behring (Ibid.), continuing his valuable work on immunity, which is reviewed above, gives the details of the method for making animals immune so as to get the protective serum in the first place. Animals were inoculated with virulent cultures of tetanus to which trichloride of iodine was added, so that each culture contained a different amount, from $\frac{2}{10}$ to $\frac{5}{100}$ per cent.; also carbolic acid was added to each till they contained one-half of one per cent. Animals which recovered from inoculations with any of these cultures if they had suffered from symptoms of the disease, were protected, but as long as any symptoms of the disease are present the animals are abnormally susceptible. Serum of animals which survive this treatment is very potent. Horse's blood-serum was found to be very strong. The activity of the serum depends, as in the case of diphtheria, upon the degree of immunity in the animal from which the serum is obtained. This serum also cures as well as protects.

Brieger, Kitasato and Wasserman (Ibid. Bd. xii., Heft. 2) regard the subject of artificial immunity as the most important study which can occupy any investigator at the present time. It not only offers the key to acquired immunity, but promises to give a valuable means to combat disease. It is of prime importance in the prevention and cure of diseases. The meaning of immunity has been but poorly understood; it is not clear what is meant by immunity in the different works on the subject. It has not been sharply defined. A definition can only be found by bearing in mind the difference between infection on the one hand and intoxication on the other, as first pointed out by Koch. An animal can be said to enjoy immunity only when the organism of the disease in question cannot grow in its tissues. With those parasitic micro-organisms, therefore, "which cause disease alone by their enormously rapid growth—*i.e.*, plugging up the capillaries and making a mechanical hindrance irreconcilable with the continuance of the life of the animal—immunity is synonymous with absolute protection against the disease."

It is an entirely different matter with those diseases in which the organisms remain more or less local, but produce a specific poison, which diffuses itself through the entire body. An animal can be protected in two ways from such diseases: 1. By making it impossible for the organism in question to grow, and this is the production of *immunity*. 2. By making the animal indifferent to the poisonous products of the bacterium, this is called *poison-proof* ("giftfest").

In the present work the authors have worked especially on the making of animals poison-proof. A study of poisonous products of bacteria shows that they are albuminous bodies having certain resemblances to the physiological ferments or enzymes, which are themselves poisons. But these poisonous physiological ferments and enzymes circulate in the normal animal without causing any disturbance. "Now we regard the thyroid thymus and lymphatic glands as the organs which probably have the power of counteracting these poisons." This view is corroborated by the observation that a local affection often spreads to the nearest lymphatic glands but there suddenly stops. The same observation has been made in regard to the thyroid. 'Moreover, the removal of the thyroid is followed by symptoms of chronic intoxication and also by inability on the part of the animal to resist caffeine, and also that injections of the juice of the thyroid causes the symptoms of intoxication to disappear, also transplantations of the thyroid have been made for this purpose with good results.

A three-fold problem presented itself :

1. Means had to be found to obtain the antitoxic substances from the cells without destroying the antitoxic properties of the substance so obtained.

2. It was necessary to test the effects of these upon the bacterial poisons outside the body.

3. To study their power of rendering animals proof against bacterial poisons.

The effects upon bacterial poisons outside the body (2) were tested in two ways: (*a*) By cultivating the organisms in peptonized bouillon, to which the glandular substance was added in the proportion of one-half of one per cent. Cultures of this kind often had, even in three days' time, no more poison. (*b*) By mixing virulent cultures with the antitoxic gland.

In studying the power of the substance of the gland in rendering animals poison-proof (3) four conditions are involved. These conditions are very apparent, but have often been overlooked. 1. Susceptible animals must be used. 2. Cultures of full virulence must be used for the final test. 3. Every animal used as control must die promptly. 4. The protected animals must not die even several weeks after inoculation.

Peritoneal injections are the most satisfactory, as the material is more quickly and promptly absorbed than in subcutaneous inoculations. The amount of resistance was tested by inoculating the animal with a deadly dose of a culture and also by using its serum to protect other animals. In order to test whether the living, *i.e.*, cellular elements of the blood had any protective value, nucleine obtained from pus was tested without any results.

The actual method of getting the thymus extract is as follows: Two or three glands from calves are chopped up fine and equal parts by weight of distilled water is added. This is allowed to stand twelve hours in the refrigerator and is then strained through gauze and pressed out. Carbonate of soda and water is added so as to prevent coagulation. The amounts of these are tested on a small portion, and when the proportionate amounts have been found in this way they are added to the whole. A faintly blue reaction generally indicates the proper amount. It must now be sterilized for fifteen minutes at 100° C., when it becomes greyish-brown and remains in solution. Any flakes which form are filtered out cold through linen. The liquid also has a milky opalescence and mixes in all proportions with water. The liquid may be used to cultivate micro-organisms in, or it may be mixed with virulent cultures. Some organisms will not grow in the liquid unless it is greatly diluted. But either mixed with culture, or used as a culture medium itself, it has the power of depriving the organisms of their disease-producing property. The organisms themselves are not destroyed.

The results obtained with working with this liquid are as follows:

1. From certain organs which contain a large amount of cells in healthy animals we have obtained substances which exercise phenomenal antitoxic properties.

2. Bacterial cultures which have been subjected to the action of such substances protect animals against the parasitic disease in question.

It still remains to be seen whether all these organs, especially the puzzling thymus gland, have the power, normally, to protect the animals and destroy the bacterial poison, as has been proven for the thyroid. The cells of these organs do not contain the active principal. The protective property is specific, *i.e.*, an animal protected against tetanus is still susceptible to typhoid fever. It is apparent that the protective substance and the substance which produces the disease are two different things. The thymus and thyroid extracts destroy the latter but do not affect the former. The protective substance must be contained in the cultures themselves, otherwise the action would not be specific. The thymus and thyroid extracts merely allow the protective substance to act by destroying the poisonous substance. The protective substance is found to be lodged in the cells of the bacteria. The greater the number of bacteria in a culture which has been deprived of the toxic substance the greater its protective power. So the point to be attained is to introduce a culture deprived of its toxalbumin, but containing the greatest possible number of organisms. As has already been said, certain extracts of animal tissues enables us to get rid of the toxalbumins, but we can also do the same thing by other chemicals and by the use of heat as well, as was pointed out by Brieger. A combination of the former with the latter methods also gives good results. The characteristics of the protective substance are that it contains a relatively large amount of phosphorus, and that it will not pass through a porcelain filter; and the protective substances of typhoid fever, tetanus, and diphtheria are destroyed by a temperature of 100° C.

Paul Ehrlich (Ibid. Bd. xii., 2) has continued his work on making animals poison-proof against ricin, the poisonous principle of the castor oil bean, and afrin the poisonous principle of jequirity (Deutsche medicinische Wochenschrift, Nos. 32 and 44, 1891), also against robin the poisonous principle of acacia, by testing whether the progeny of such animals are also protected. The three ways in which immunity may be transmitted are: 1. By inheritance in the ontogenetic sense. 2. By a material gift of the antitoxic substance. 3. By direct intra-uterine influence on the fœtal tissues by the immunity-substance.

It was found by a large number of experiments that the male element does not have any influence. It makes no difference in the immunity of the offspring whether the father has acquired immunity or not. On the contrary the maternal influence is very marked. In testing this point pregnant females were selected which had acquired a high degree of immunity before impregnation —not those which were undergoing the process. If the process is still in progress and incomplete the experiments could be interpreted in two ways if the offspring should be found to have acquired immunity. It might be that the mother had transmitted the immunity-substance on the one hand, or on the other it might be that the fœtus was protected in utero by the same protective procedure as the mother herself. In all cases where the mother enjoyed complete immunity the offspring were found to be immune four weeks after birth; but three months after birth all immunity had disappeared. Ehrlich, accordingly, makes a distinction between the immunity which is temporary, disappearing in a shorter or longer time, and that which is permanent. The former he calls possible immunity, the latter active. The immunity, therefore, which is derived from the mother at birth is passive; it remains only until all the immunity-substance derived from the mother is eliminated. In active immunity the substance is formed in the body of the animal and is extraordinarily stable. Attempts were made to give active immunity to the fœtus in utero, but were complicated by accident.

By having two animals, one immune and one not, impregnated at the same time, so as to get litters of the same age, one litter having inherited passive immunity, the other being normal, experiments were made in noting the effect of changing mothers—giving the young of the immune mother to the normal mother and *vice versa.* It was found that: 1. Offspring from an immune mother enjoy as great an immunity for a short time, twenty-one days, as the mother. 2. Offspring from a normal mother taking the milk of an immune female foster-mother acquire a high degree of immunity which increases with the length of time they suck.

Summary.—There are two factors in inherited immunity: 1. The gift of the immune mother in utero. 2. The further acquisition of immunity from the milk. It was not possible to convey immunity to the offspring by gradually making the mother immune during lactation, but, perhaps, if attenuated cultures are used this might be done.

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MISCELLANEOUS.

HERNIA, OPERABLE AND INOPERABLE.

Dr. Thos. H. Manley, in a paper on this subject, submitted at the late meeting of the American Medical Association, concluded as follows: Although, during the past fifteen or twenty years, very much has been written on hernial operations; much in America, but more in Europe, so far as can be learned from current literature, no one has yet made an attempt in a methodical manner, in any brochure or treatise published, to systematically describe and classify those herniæ which are operable and those which are not. For the purpose, of at least in part, filling in this void, this essay is offered.

In epitomizing the subject and considering the question of treatment of hernia, in a general way, it may be said with something approaching definite certainty:

1. That, inasmuch as no operative technique yet devised, or ever can be, will always effectually remove the causes of any species of hernia; in consequence of this a permanent, enduring cure is quite out of the question, in certain cases.

2. The radical cure of hernia may be regarded as one of the most satisfactory operations in general surgery. The fact that the disease often relapses constitutes no valid objection against surgical intervention; for this is commonly the case in the major part of operations performed on the human body.

3. A radical operation for a non-strangulated hernia, which gives no serious inconvenience, is not a justifiable procedure and should not be encouraged, unless there are pressing reasons for it; as the presence of a neoplastic formation in the sac, or this latter is occupied by an ovary, or some other viscus.

4. Hernial operations should not be performed in extremes of age. In early life there is seldom pressing necessity for them. In very advanced age the risk, immediate or remote to life or health, involved by operation, more than compensates for the prospective benefit.

5. Unless there are specially contra-indicating factors in given cases, inguinal hernia should always be treated by radical operation in women, which, with them is so often attended by a permanent cure.

6. As a rule, all operations on reducible or incarcerated herniæ are radically curative, though the disease commonly relapses; nevertheless, the immediate danger of strangulation has been removed and the hernia has been placed in a position to be more comfortably borne by a truss.

7. Every operation for strangulated vaginal or femoral hernia should always include such additional steps as will effect thereafter an obliteration of the canal without undue pressure on the tubular structures passing through it.

8. Very large, old herniæ, in any of the abdominal regions are not operable, except in the event of strangulation, as their sudden return is often attended with mortal consequences.

◆

A LAW TO SUPPRESS TUBERCULOSIS.

A law to suppress tuberculosis, especially in milch cows, was enacted by the last New York legislature. In general, the law authorizes the health inspectors to examine all the cattle in the State, and, when the disease is found, to cause the animal to be killed. The owner will be reimbursed for the actual value of the cow. The plan of carrying on this inspection has not been decided upon. An appropriation of only $5,000 has been made for the purpose. The diary statistics of the State show that milk production is the largest industry in the State, and that it is greater than that of the milk production of all the other States put together. There are 11,600,000 milch cows in the State. The farmers sell to New York City $11,500,000 worth of milk, and to the people of the whole State $40,000,000 worth.

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ANTISEPTIC TREATMENT OF CHOLERA.

PHYSICIANS say that except in the application of *one principle*, the medicinal prophylaxis and cure of cholera have not advanced for twenty years. But this principle they have pronounced to be in full accord with modern medicine, and they have widely tested it in the most formidable abdominal conditions with which they have to contend. This therapeutic measure is known as

Intestinal Antisepsis.

THE conventional treatment of *cholera* with opiates, astringents and acids is said to have met several of the needed indications. But in the last European epidemic when scientific methods were demanded, it was felt that *no treatment could be rational which failed to take into account the constant fermentive and putrefactive changes* which were symptomatic of the condition. It was decided that *antiseptics must be used* at the seat of disturbance. Antiseptic treatment by the salicylates had already given splendid results in typhoid fever, and many morbid abdominal conditions; its use in cholera was therefore instituted, though too late to be fully tested. Then the phenolic salicylates appeared, and physicians freely employed them in intestinal antisepsis. But a serious obstacle interfered with the success of the salicylic compounds given in sufficient doses. Gastro-intestinal disturbances arose which often compelled a discontinuance of the remedy in the hour of victory. The object of physicians and chemists was now to obtain A COMBINATION OF SALICYLIC ACID AND PHENOL which should be effective without being toxic. This finally led to the preparation of

SALOPHEN

(ACETYL P. AMIDO SALOL.)

SALOPHEN which is a product of The Farbenfabriken vorm. Friedr. Bayer & Co. of Elberfeld, Germany, who also supply Phenacetine-Bayer, Sulfonal-Bayer, Aristol and Europhen.

THE new remedy possesses the full therapeutic powers of salicylic acid and phenol without giving a sign of toxic effect or gastric disturbance. Indeed, doses of 6.0 Gm. (ninety grains) have been adminstered daily to the human subject without an untoward symptom. Hence, *Salophen* may be given throughout the course of treatment of cholera cases, and, by keeping the gastro-intestinal tract aseptic, its use must conduce largely to the prevention of relapse. For the same reason, the continuous use of SALOPHEN AS A PROPHYLACTIC during the prevalence of a cholera epidemic, will naturally suggest itself to the physician. We learn moreover from a recent number of the *British Medical Journal* that one of the homologues of Salophen is now prescribed in England with this object, as well as in the treatment of developed Cholera.

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THE

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BROOKLYN, N. Y., SEPTEMBER 10, 1892.

CHOLERA.

MEASURES FOR ITS PREVENTION, MANAGEMENT AND TREATMENT.

STENOGRAPHIC REPORT OF SPECIAL MEETING OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS, HELD SEPTEMBER 6, 1892.

—INTRODUCTORY REMARKS.—

In opening the meeting, Dr. Z. T. Emery, President, said :

Gentlemen—You have been called together at this special meeting to consider a subject which is engrossing the attention of the whole country and especially of the cities about the port of New York. It is confidently expected that the gathering of medical men to-night will serve as a notice to the citizens of Brooklyn that their advisers in matters pertaining to health are keenly alive to the possible dangers which threaten their welfare, and that they propose to be instantly ready with measures to prevent the occurrence of this disease in our midst, or if, unhappily, it should make its appearance among us, to be ready to grapple with it and stamp it out immediately.

WORK OF THE DEPARTMENT OF HEALTH IN ANTICIPATION OF CHOLERA, AND PLANS FOR ITS MANAGEMENT IN THE EVENT OF ITS INTRODUCTION.

BY JOHN GRIFFIN, M.D.,

Commissioner of Health.

It is of course a question of the highest importance that has been submitted to you for discussion to-night, and perhaps from no others than you would words that would restore public confidence come so well. There is a great deal of panic, a great deal of excited feeling in the community, and the fact that you, their trusted guides in protecting their lives and in dealing with citizens and their private ailments, have taken charge of this matter, will tend to allay apprehension. No matter how serious or how grave our fears may be of the approach of this disease, or how much we may share it in common, yet, we must consider the question calmly and deal with it in a practical spirit. It is no use in my opinion to say to the general public that things are at their worst, that we are not prepared for such an emergency, and that the mere appearance of cholera means the decimation of the people—you know and I know that it is not so. If it be possible to have introduced into this community, which I hope it is not, any case of that dread disease, we shall be able to deal with it as we have done in the past. To my mind never before has either this city or its associate, New York, been better prepared to meet an epidemic and stamp it out, than at present.

With the quarantine regulations strict as they are, and rigidly enforced as they are by the present officer in charge, if through inadvertence a case should be transmitted through the gates of our harbor and reach either city, we shall deal with it, I trust, in an intelligent spirit, and in such a way as to effectually relieve public alarm.

I do not propose to address you in any formal way upon the topic that has been presented, but rather to go over in a general manner the workings of our department, and illustrate to you what facilities we have for dealing with a transmitted case if any should arise in this community. It has been said that the city at present is not in a cleanly condition. I desire to positively and distinctly take issue with that assertion. In every great community, in every large and populous center, there must be bad spots, there must be conditions of uncleanliness, there must be places that cannot be subjected to the tests that you and I would apply to the better portions of the city. On all sides of this city, or at all events on three sides of it, you have existing from the very foundation of the city, water courses that necessarily have become foul, disease-producing and filthy, which unfortunately our predecessors in charge of this community have failed to give due attention to, and anticipate evils that have in a measure come upon us because of them. You have, on the southern boundary of the city; a water-course known as Gowanus Canal. I need not repeat its many charms nor the harm that may emanate from it.

In the central portion of the city you have two creeks, Wallabout Creek and Bushwick Creek, which are both foul and filthy. On the extreme eastern border you have the larger water-course of Newtown Creek, which is foul and filthy beyond description, and which should have been abated long ago. These things have not arisen upon us, but come now to aggravate the difficulty of dealing with the question of cholera. I point out these things to you in all frankness, so you may appreciate, as I have done, the difficulty of dealing with practical questions in a great city. The main streets of this city are now in a cleaner condition than I have observed them for many years. That does not by any means mean that the streets are clean in the sense that you or I would desire them to be. Perfectly clean streets can only be obtained by a thorough cleaning and sweeping daily, for which purpose a large amount of money is needed, and a much more liberal appropriation than has heretofore been made. In the more densely populated parts of the city there are certain wards to which I would call your attention. Colonies of Polish immigrants, Jews, and the poorer classes from Central and Eastern Europe have located, some in the 26th Ward, and formed a settlement known as Brownsville. That section of the city is now unprovided with sewers, has imperfectly graded streets, has very little distribution of water, and the condition of the people resident there is necessarily not of the best. Similar colonies of these people exist in the 16th and 14th Wards ; in the 16th particularly, intermingled with the large class of more reputable and more solid representatives of the community—Germans; in the 14th Ward, in the neighborhood of the great sugar refineries, and the great manufactories, and in the 13th, 15th and portions of the 17th Wards, immediately adjoining this odorous Creek that I have spoken of a moment ago. Colonies of Italians have located themselves in the lower portion of the 2d Ward, in the neighborhood of Adams Street, Front Street, York Street, etc.; Navy Street in the vicinity of Prospect, York and some other contiguous streets; Navy and Raymond Streets, in the vicinity of Johnson and Tillary Streets. In the 1st Ward in State Street and Columbia Street, in the 6th and 12th Wards in the neighborhood of Hamilton Avenue, Sackett Street and the streets south of that line. In the 3rd and and 10th Wards in the neighborhood of President Street, and Carroll Street there is a mass of population that is not in the most cleanly condition. These are practically the plague spots of the city. We have been giving them our attention, but we cannot root out the people in these shanties and tenements and enforce any rule of sanitation to limit the number of occupants of any apartment or any house, as it would simply be spreading this class of population which would necessarily aggregate again, which seems to be the tendency of these people, and would require a much longer time to break up again.

The Street Cleaning Department, upon my appeal and upon the instance of the Mayor of the City has taken upon itself increased activity, and has urged upon the representatives of its various departments a wider and more enlarged effort, and I have assurances that within a day or two all of these places that I have referred to will be fairly cleaned and swept up. While awaiting such action, by another department of the city, under my direction, sprinkling carts to the number of eight have been sent into these various neighborhoods, and some sixteen or twenty men with sprinkling cans have been directed to enter the alley-ways, court-yards and halls, and the various apartments in these houses. Notice has been given to the owners that they must exercise great diligence and great care in the maintenance of their property, and that special attention must be given to whitewashing and other means of cleanliness that such premises call for. I think in a general way that would be about as much as I would care to say upon the state of the city at present.

Another important matter that is of interest to you is as to the disposition of shipping and the discharge of cargo and freight from arriving vessels. You are all familiar with the restraints in vogue at Quarantine. The detention by the representatives of that department, the careful examination of vessels, particularly at the present time, the fumigation and disinfection of all material on board, as well as the equipment of men. The passenger vessels are subjected to particular restraints which have been abundantly described in the papers and which I will not refer to here. Our more particular concern is as to the discharge of cargoes. At an early period of the season of the arrival of vessels from infected ports, I notified the existing officers of the department, and consented to a discharge of rags, hides and skins from vessels lying at our piers into lighters alongside. These permits were based on the letters issued by the Quarantine Officer and upon special permits issued by him or his representatives, as to the character of the rags, and as to their entire freedom from any contagious disease. His action was largely controlled by Consular certificates accompanying each consignment which represented as a matter of knowledge on the part of the Consul giving such certificate, that these rags were collected in sections of the country absolutely free from contagious disease. Supplementing that action of the Quarantine Officer, we deemed it necessary to obtain from every captain, surgeon, or other accredited officer of the vessel an affidavit reciting more in detail the circumstances of the voyage, the history of their experience from their port of departure and their ports of call, until arrival in the harbor of New York. As soon as the warm weather was upon us, and before the suggestion of the spread of the disease from the extreme eastern portion of Europe and Russian territory had come to us, I directed that for the future no rags should at any time be discharged from vessels at the piers; that none should be admitted to be placed in storage, but that all should be immediately placed in lighters for removal to their destination at the mills. There was no permission given to detain batches or parcels of goods which were frequently sent here on speculation to secure a purchaser, and they were sent to the mills and subjected to special treatment. That order I have further modified and have absolutely refused to permit the landing of rags at any time in this city at any of our piers. The commercial value of these things is so small that it would be quite as well if the whole trade were discouraged. Vessels bring in rags frequently for ballast or to secure other portions of cargo, but at all events no rags at present will be permitted in the city. As a further precaution I deemed it necessary, in view of the detention of these vessels recently at Quarantine, to communicate with the Immigration Officers at Ellis Island, and to have forwarded to the Department of Health, the names of all immigrants that might arrive at Brooklyn, in order that we might be able to take further observation of them. We have not had any case that even simulated cholera in this city during the past week.

A word, perhaps, might be profitable as to the manner of conducting the work in the Department by the inspectors. We have available for inspection in this city, which we have divided into five districts, five Sanitary Inspectors, whose especial duty it is to look after contagious diseases and assist generally in making the inspections, but more particularly to examine suspicious or doubtful cases of contagious disease. They are aided by sixteen Assistant Sanitary Inspectors, who perform their duty in a manner that is no doubt known to you all and approved by you, from the fact that I have heard but very little complaint of the gentlemen exercising that duty. There are eleven Plumbing Inspectors whose duties in a general way may be described as making examinations of new buildings, examining work as to progress, making a final inspection and report as to the strength of the materials, the capacity of resistance, and the general quality of traps, and other apparatus belonging to the work. Further, they investigate complaints as to defective plumbing in houses, leaky pipes, breaks in wastes, cellars that may become damp and foul because of such leakage, etc. We have nine general sanitary inspectors, who make examinations of yards, apartments, vaults, cesspools, and everything of that nature. During the summer we have had twenty-five inspectors appointed to visit the poorer sections of the city, attend upon sick children, administer to their wants and prescribe for them, and to procure the necessary medicines, and in special cases give such other assistance as may be needed. Incident to these duties they were to take note of the general interior of the houses, and of the defects existing, and make such return to the Department that an examination would be immediate, and such remedy as possible procured through the courts. In our department we have no summary jurisdiction. When we see a case that is in need of immediate remedy, we have to wait and bring the matter into the courts, and obtained redress by legal means and thereby lose valuable time.

This Summer Corps ordinarily terminates its service at the close of the summer, generally the first of September, but at present the general disturbance of public sentiment and the possibility of the introduction of this dread disease into the city has induced me to continue its services for another month, and I am authorized by the proper authorities of the city to incur the necessary expense. These gentlemen are now occupied in aiding the other inspectors in following up offensive places, searching out the cause of complaint, and applying such remedy as they can. Every proceeding for the abatement of a nuisance in the city must be by complaint. The commission of a nuisance is a misdemeanor, a violation of an ordinance, and the offender or accused person must be taken to court and the question tried as a matter of fact. Upon proof the magistrate imposes a suitable penalty or dismisses the case upon promise of removal of the cause. In the present instances the magistrates have consented to hear such complaints daily, and instead of the usual course in such cases to impose at once a summary sentence. I think this will strengthen our hands, though out of a great number of complaints within the past week a mere notification to the persons interested, property owners and others has been, in the great majority of cases, attended to without the necessity of taking such matters into court. Within the week I have deemed it necessary to appeal to the police authorities for additional aid in the carrying out of the work of our department, more particularly the inviting of police officers in their patrol to note the little things as well as the great things which occur, all of which in the aggregate go to make up the offensive features of our daily experience in the city. As instances of the energy with which they are now at work, within the last two days we have received nearly 3,000 complaints, petty in many instances, but needing attention of one kind or another. I have issued a circular to the police force calling their attention more particularly to the enforcement of particular ordinances. I have had a copy of it made so as to be handy for convenient reference. I did not wish to cumber the programme with too much matter, unless it should divert the attention of the police from that to which their attention was specially invited. Within the last week I have issued a circular to the public of like nature to that presented in the New York papers, culled principally from textbooks, summarizing the general principles that you impart to your patients.

With a view to preparation for the possible coming of this disease, for we cannot entirely disregard the admonition we have, for the nearness of it now in our outer harbor admonishes us to be, if possible, more active than in the past. I have secured two barges, which, fitted up as hospital vessels, may be placed at convenient points on the shore. It will not be advisable nor practicable to place them at any point along the East River, because of the narrowness of the stream and the possibility of other vessels coming in contact with them, so we are somewhat limited as to the convenience of location for such vessels. I have also, in conference with others, looked up three sites at three different points in the city at which it might be possible to locate on the shortest possible notice, temporary shelter in the shape of tents, either of canvas or the patent contrivances so often presented to us for approval. I have also invited to a conference the representatives of the hospitals of the city, and I am happy to say that with one accord and in the most positive way they expressed their readiness to aid in any manner in meeting the emergency that has arisen. Of course I have pointed out to them that at any moment a case of cholera might arise in the city, that it might be in their neighborhood or in their midst, that it might arise either among their patients, or among their attendants, that it might be conveyed to them by an ambulance and the diagnosis made within their premises, and that immediately some disposition should be made of such patients. But it was not necessary to dwell upon that feature of the question, they unhesitatingly offered all of the accommodations and conveniences of their institutions for the reception of any cases that might arise in their neighborhoods. Two of the larger hospitals are specially favored in the possession of large and extensive grounds, where temporary accommodation could be afforded without serious inconvenience to the other inmates, and where the most perfect isolation could be offered for the smallest expenditure of money. I felt no hesitation in assuring these gentlemen if any expenditure was necessary that the city would meet it. These two hospitals are the Brooklyn Hospital and Seney Hospital. Each of the other hospitals has expressed its readiness to make such provisions as its limited quarters would admit of, and, if necessary, would abandon a whole ward for the accommodation of such patients as might be presented to it. In one instance, that of St. Peter's, after the gentlemen representing it had departed, I was summoned to the telephone and had word from that hospital that they would at once donate a ward for the reception of any patients that might come, tendering the services gratuitously of the Sisters of that institution to wait upon the patients on the cholera barges.

I do not know, Mr. President, that I can add much more to the desultory description of our work, save to say that I hope to have the cordial and generous support of the members of the Medical Society of the County of Kings in the prosecution of such efforts as may be necessary for the protection of the public health and the protection of their patients.

Dr. J. H. Raymond offered the following resolution, which was seconded by Dr. Charles Jewett and unanimously adopted:

Resolved, That the Medical Society of the County of Kings heartily commends the efforts made by the Commissioner of Health of the City of Brooklyn to prevent the introduction of cholera into Brooklyn, and pledges him its hearty support and coöperation.

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BACTERIOLOGY OF CHOLERA AND METHODS OF DISINFECTION.

BY GEORGE M. STERNBERG, M.D.,

Deputy Surgeon-General U. S. Army.

As I understand it, I am expected to say something to you about the etiology of cholera, and about its disinfection. Of course, it is not necessary to describe the "comma bacillus" of Koch, you are all familiar with it. I may say, however, that at the present time bacteriologists all over the world are pretty thoroughly convinced that this is the special etiological agent in cholera. Koch at first met with many opponents, who claimed to have found micro-organisms under different circumstances which were identical, but these claims were not proven. The comma bacillus found in the mouth by Lewis proved not to be in any way identical, and numerous observers have made cultures from the salivary secretions of man, but no one has ever cultivated from the mouth of man a spirillum which liquefies albumen like that of Koch. In reference to comma bacilli in the intestines and their presence in other diseases, numerous bacteriological studies which have been made of the fæces of persons in health and persons with various diseases have utterly failed to demonstrate the presence of anything corresponding to Koch's comma bacillus, or as we now call it, the spirillum of Asiatic cholera. I myself have made very extended bacteriological researches in yellow fever, having collected fæces from the intestines of cadavers, forty in number, and the discharges from a large number of patients during the epidemic at Decatur, Ala. I have also made comparative experiments with discharges from healthy persons in a large number of cases, and I have never encountered anything which corresponded with Koch's comma bacillus. But, on the other hand, all competent bacteriologists who have made researches at the proper time and in the proper way have, in cholera, been able to demonstrate the presence of that particular micro-organism. I have not heard the results of the researches now being made at Quarantine Station, but we cannot doubt it will be found there.

As to the biological characteristics of this micro-organism, I think I will save time by referring to some of the proof-sheets of my work, which is now being put in type. This spirillum grows readily in the presence of oxygen, and also in the absence of oxygen, as it must do to thrive in the intestines. I shall not stop to dwell upon its characteristics in culture media, but I will say that it does not form spores and consequently is very easily destroyed. Indeed it is one of the most easily destroyed of all the pathogenic organisms known. It grows readily in a variety of organic media. Milk is a very favorable medium, but it does not grow in acid media. A slightly alkaline medium is most favorable for its growth. It grows very readily in bouillon which is diluted with eight or ten parts of water, and it also multiplies to some extent in sterilized river or well-water. Experience shows that there is sufficient organic pabulum in ordinary river or well-water for the multiplication of this particular micro-organism. In water which is rich in organic pabulum, and consequently contains numerous other common organisms, it dies out, as these take the precedence, so it would apparently multiply more rapidly in water not containing a large amount of organic material than it would in sewage. Koch found in his earliest investigation that this spirillum grows readily on moist linen, or the soiled clothing of patients. In experiments made by Bolton in 1886, he found that it multiplied in distilled water to which bouillon was added in the proportion of fifteen to twenty-five parts in the thousand. The thermal death point of the cholera spirillum I fixed myself some years ago at 52° Centigrade, which is 125.6 degrees Fahrenheit. Kitasato has since made experiments and places it a little higher, at 55° C. There seems to be a difference in cultures in different media, but ten minutes exposure to 55° C. will suffice. Sixty degrees C. is a good figure to remember, that is, 140° F. and ten minutes exposure to this temperature may be relied upon for the destruction of this spirillum; so if your milk or water has been heated up to that point you are safe. In giving our directions to the public we usually say boil your water for half an hour.

Another very important point about these particular micro-organisms is the fact that they are so quickly destroyed by desiccation. Koch found in his early experiments that a few hours' exposure in dry air when the culture was spread upon a glass cover were sufficient to kill it. Since that Kitasato has taken up the subject, and has found that it may live for a longer time if the stratum has some thickness. If you have a very thin film upon your cover-glass the spirilla die very quickly when simply dried in the air. If a thicker layer is used, they may live for a longer time. Under certain circumstances, when he had a thick film from an agar culture Kitasato found that they lived even as long as thirteen days, but ordinarily they only survived desiccation from a few hours to twenty-four hours.

Now, therefore, in regard to articles coming from abroad that have been ten days or more on the steamer—merchandise, mails, etc., I can hardly understand how clean merchandise in original packages or mails could become infected. The mails might easily become infected by scarlet fever or small-pox from convalescents. We know very well that something from the surface of the body of such persons might get into letters written by them, and be transmitted in that way, and yet we very rarely hear of that sort of thing happening. We do not attempt to fumigate our mails on account of small-pox, and in the case of cholera, where the germ is in the intestine, even if a sick person sat up and wrote a letter, the chances are that the letter would not convey any infection. I therefore think that all this insistance upon disinfecting the mails and merchandise is going a little too far in that direction, especially as we know the biological characters of this particular micro-organism, and know that it is quickly killed by desiccation.

In regard to the value of various disinfecting agents, innumerable experiments have been made in this country and in Europe by competent observers. In a culture in bouillon, twenty-four hours old, experiments made in Koch's laboratory show that it is killed by hydrochloric acid, 1-1300, sulphuric acid, 1-1000, methyl violet 1-1000, carbolic acid 1-400. These experiments were made, however, under different conditions from those which would obtain in practical disinfection. For practical purposes the experiments made by Bolton for the Committee on Disinfectants, under my direction, several years ago, are more reliable. In Bolton's experiments the spirilla were killed in two hours by mercuric chloride 1-10,000, sulphate of copper 1-500, and carbolic acid 1-200, and one per cent. solution of carbolic acid will destroy the spirillum with great certainty in such cultures in two hours.

The methods of obtaining and testing the presence of the cholera spirillum in suspected dejecta I will not dwell upon now, but I want to call your attention to the measures recommended by the International Sanitary Conference which assembled in Rome in 1885. When cholera last prevailed in Southern Europe, the Italian government invited the countries of Europe and America to send delegates, supposed to be experts in sanitary matters, to an International Conference, for the purpose of considering measures of prophylaxis against cholera. The conference met in Rome on the 23d of May, 1885, and had daily sessions until the 7th of June. A Committee on Disinfection was appointed on my motion. This committee consisted of Dr. Koch of Berlin, Dr. Sonderegger of Switzerland, Dr. Hoffman of Vienna, Dr. Thorne Thorne of England, Dr. Semmola of Italy, Dr. Proust of France, and myself; and the report, which was made after very careful consideration, was adopted unanimously by the Conference, so that it is the most authoritative report published, although I believe a majority of health officers in the United States are not familiar with it. I made a translation of this report which was published in the *Marine Hospital Report*, volume of 1886. It recommends as a means of disinfection against cholera, besides destruction, steam at 100° Centigrade, carbolic acid, chloride of lime, and aëration. Carbolic acid and chloride of lime were to be used in aqueous solution as follows: carbolic acid, two per cent.; chloride of lime, one per cent. (called the weak solutions); carbolic acid, five per cent.: chloride of lime, four per cent. (called the strong solutions). These means of disinfection were to be applied as follows: For the disinfection of persons, one of the weak solutions should be applied. For the disinfection of clothing, bedding and similar articles, the direction is given that steam should be passed through the articles for one hour.

Steam should be passed through the articles for one hour. Steam and dry heat, as you know, are two very different matters. There has been a great deal of bad practice on this subject. Certain persons, having read that 60 degrees C. kills the spirillum, have taken it for granted that if an oven is heated up to somewhere about 100 degrees C., the cholera spirillum will certainly be destroyed. But Koch's experiments, made upon other similar organisms having about the same resisting power, show that if dry heat is used the temperature must be carried up to 220 or 230 degrees F. Learning that 220 to 230 degrees F. is required, and ignorant of the fact that it was dry heat that was meant, some authorities have directed that steam should be used at that temperature, which gives you a very great pressure and makes it impracticable. As a matter of fact 100 degrees C., the boiling point of water and temperature of live steam, is all that is required. It must, however, be freely admitted to the chamber in which the articles to be disinfected are placed and must come in contact with them. If I were in charge of a quarantine establishment and were disinfecting a quantity of things, and was satisfied that live steam had been in contact with every article thoroughly for five minutes, I would be satisfied that the disinfection was complete—a great deal more so than if a lot of articles were tumbled in together and left for an hour exposed to the action of steam, for in this case some of the articles might not be disinfected at all, as the steam does not penetrate readily into the interior of such a mass. This is an important point in using steam or sulphur dioxide. The International Sanitary Conference directs: "Immersion for twenty-four hours in one of the weak solutions—carbolic acid two per cent., chloride of lime one per cent." I saw the directions of the New York City Board of Health published in the *Times* this morning, and they call for the use of carbolic acid in five per cent. solution, which is good. A circular which I saw a few days ago recommended the use of sulphate of zinc and chloride of sodium, which salts have been proven to be comparatively worthless as disinfectants, but the directions require the use of the solution boiling hot. It is perhaps a good plan to give the people some salt, such as chloride of sodium or sulphate of zinc to put in the water in which articles to be disinfected are boiled. It might satisfy them better, and the boiling point would be somewhat higher from the adding of the salt. I was surprised that in the same circular sulphate of iron was recommended as a disinfectant for privy vaults and cesspools. It has been demonstrated that sulphate of iron has scarcely any disinfecting value; it is a good deodorant, and a tolerably good antiseptic, but is unreliable as a disinfectant. An agent which is very valuable and very important and which has not been mentioned in any of the circulars I have seen is recently slacked lime. Experiments made in Germany, with recently slacked lime, show that it is a very potent disinfectant. The cholera spirillum and various other micro-organisms in the dejecta of patients are all destroyed by a freshly prepared milk of lime, and recently slacked lime thrown into urinary vaults or cesspools is one of the cheapest and best methods of disinfection. Chloride of lime was first brought into prominence by the experiments of the Committee on Disinfectants of the American Public Health Association, as one of the very best disinfectants. It is much cheaper than carbolic acid, and has other advantages. In hospitals, sulphate of iron, which I have been telling you has no value as a disinfectant, kept in a boiling hot solution in a reservoir of some kind, would be an excellent thing to disinfect bed-pans—the hot water would be the disinfectant and the iron would remove the odor.

" Articles of leather such as trunks, boots, etc., should be either destroyed or washed several times with one of the weak solutions. Vomited matter and dejections of the sick should be mixed with one of the strong solutions in quantity equal to the material to be disinfected. Linen articles, soiled with the dejections of the sick, if not immediately subjected to the steam, should be immersed in one of the strong solutions and left for four hours."

The article which I shall next read was adopted unanimously by the Committee on Disinfectants and subsequently by the International Sanitary Conference.

" The disinfection of merchandise and of the mails is unnecessary. (Steam under pressure is the only reliable agent for the disinfection of rags.)" By merchandise is meant ordinary merchandise in unopened packages, such as goods from wholesale merchants, etc. It does not mean the rags here spoken of, it does not mean damp hides in bad condition, it does not mean spoiled meats or vegetables undergoing putrefaction, but it means ordinary merchandise stored in the hold of a vessel. It is a great mistake to spend time in disinfecting things that do not need it and to neglect those things which do need it, and we should devote ourselves to the things which especially need disinfection.

Further directions are given about boiling water for drinking purposes, etc., and the conclusions further relate to quarantine in general and the precautions to be taken at the port of departure, during the voyage and, in the case of vessels from infected ports, upon arrival. I shall not enter upon the subject of quarantine, but before leaving the platform I wish to call your attention to the method which I think is the most satisfactory for collecting discharges from cholera patients and others for bacteriological examination and transportation from the bedside to the laboratory. What we want is some material from the intestine, or, if the patient is living, a little material from the vessel containing dejecta, being very careful, if sending it to a bacteriologist, that it has not been already disinfected—that is, that the material has not been placed in a vessel that has contained a disinfectant. I have offered to make these examinations at the Hoagland Laboratory, if there should be any call for them in the city of Brooklyn. I am one of those who believe that if a certain number of cases were landed from Quarantine here in Brooklyn or in New York, and scattered about in ten or a dozen different parts of the city, that with the facilities we have, and the knowledge we now have of prophylaxis by means of disinfection and isolation, the disease could be stopped even then. I believe it would not extend in these cities, because I have a good deal of confidence in our water supply, You all know that when the cholera prevailed in Naples, as a very severe epidemic, refugees went to Rome and fell sick and died. Rome is dirty enough, but she had a good water supply, and the disease did not spread, there being no cases except those of the refugees. We hear that refugees from Hamburg have been taken sick in Berlin, but there is no local epidemic there so far, and I believe the Berlin people will be able to keep it away, and we can do the same thing.

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THE HYGIENE OF CHOLERA.

BY ALBERT L. GIHON, M.D.,

Medical Director U. S. N., ex-President American Public Health Association.

I thank you very cordially for your courtesy in asking me to say something, and as a member of the corps which has to do with these floating habitations which have invariably the reputation of bringing this disease and carrying it about the world, I cannot refuse to say something, but after the very interesting talk of my friend Colonel Sternberg, I feel that there is very little left for me to say. The occasion that brings us together just now is not actually the presence of an epidemic but of its attendant cause, because all epidemics have a phobic *alter ego*, and we have now amongst us really not cholera but cholera-phobia; it kills in an aggravated form, but in a mild form I do not know that it is altogether to be regretted. It is to be regretted that as it had to come, it did not come two or three months ago when Congress was in session, because then it is possible we would have had that legislation effected, which in the opinion of the members of the medical corps to which I belong, and of all the sanitarians that I know of, is the only possible effectual means of keeping diseases like this out of the country; I mean the establishment of a national department or bureau of the public health. I recently learned from the members of the Executive Committee of what used to be called the National Conference of State Boards of Health, but which in the last year is now known as the International Conference of State Boards and Provincial Boards, not only the United States but Canada and Mexico. I learned from them that it was the desire and intention of the State Boards of Health of this country and Canada and Mexico that there should be such a department of public health in the United States, which could unify them, unite them together, coöperate with them, and in time of emergency like this could direct them, could authorize them to do, could tell them what ought to be done. Now a national board of health, or department of health, or a bureau of the public health, whatever you call it, is absolutely useless unless it is an efficient one, and how can it be an efficient one unless it has all the means and money and men that it requires.

The mistake that health-men make everywhere is in tacitly acquiescing in the poor little sum doled out to them, and tacitly acquiescing in that the nation becomes imbued with the idea that that little is enough, and I believe health boards and health officers would do better by refusing to do anything unless they had the means they ought to have. A national board of health with $5,000 or $10,000 or $20,000 is no earthly good. It must have the power to use $100,000 or $200,000 if necessary. Now if we had a national department of the public health, foreign nations would know what to expect of us. They do not care what the several states are doing, they want to know what the United States is doing. And what is the United States doing? Absolutely nothing, except that the President issues a proclamation, which is all he can do. And what are the provisions of the several states? As far as I know there are but three equipped or tolerably well equipped quarantine stations in the United States. The first and best is that of the State of Louisiana at New Orleans, the second at Charleston, South Carolina, and the third your own in the harbor of New York. And what of that; if you read the papers thoroughly this morning you saw the preliminary report of this Executive Committee, and you know what their notion is of the thoroughness of the measures now in practice at the lower Quarantine. It is not for me to criticise them, but I beg you to read what is said in the papers, and draw your own inference. I may make one criticism. The first absolute necessity in dealing with cases like this is to take the well out of a ship as soon as possible, and not to shut them up and keep them there. Such a practice is indefensible, it is absurd, it is preposterous, whether it be five, ten, fifteen or twenty days; they should not be shut up on board ship a single day.

In this connection I may state my experience with cholera some years ago, when a yellow fever ship came to the Navy Yard at Kittery. The health officers of Kittery quarantined her and kept the well on board. I persuaded the Commander, I was a health officer (I lived in the Navy Yard) and I guaranteed the safety of that community if they would let me do as I wanted. I took Seeley's Island and put every man well and sick out of the ship on to the Island. The Captain said I would risk my professional reputation and my whole career in doing it, but I begged these men that they would coöperate with me, and they coöperated so thoroughly that one day when a bum-boat man was found on board the ship, they brought him aft and were told by the captain to disinfect him, they stripped him and went at him with hard brushes and took all the hide off, and after he was in that condition they threw him overboard and let him swim ashore. That shows how you can interest your patients and make them coöperate with you. I am perfectly well satisfied that if all the well persons were taken out of those ships now at Quarantine, it would be a very short time before they could go about their business. Dr. Jenkins does not do that now because he has not got the place to put them, and that is one of the defects of the quarantine establishment here. There should be tents provided, and there ought to be vessels taken there and every person taken out of those ships at once.

If we cannot do that, what is it that we can do in the city? It is very simple; everybody says clean the city. Do you realize what cleaning the city is, what sanitary inspections are? I read in the paper the other day that four thousand tenement houses had been visited and only one hundred had been found unclean. This was in New York. Can anybody believe that? Do you realize how long it takes to inspect one tenement house? I do not believe there is a man here who can inspect thoroughly one hundred tenement houses in a week. I said thoroughly, I do not mean simply to walk in and look around the rooms. To inspect a tenement house or a palace involves beginning at the attic, the opening of every door and window in that house, the taking down of every curtain, the looking under every bed, the turning over and moving of that bed, the opening of every closet and looking at things in the closet, the moving of every piece of furniture and going down and down into the cellar and looking at everything in that cellar. The man that can do that and give the necessary directions for the relief of what he finds there will find at the end of his week after he has inspected his one hundred houses, at the end of forty weeks after having gone through four thousand houses, he will find not the one hundred unclean ones, but one hundred clean ones, and there will be three thousand nine hundred unclean ones.

I had a little experience in the city of Brooklyn some years ago when I was a resident here. I was asked to see a case of typhoid fever in consultation. I entered the house and found the parlor was one of those show parlors, shut up tight, the air of which was extremely heavy. I saw the patient and it did not take me long to inspect the patient, but I asked to see the cellar. The lady of the house had never been in the cellar and she considered it rather strange that I wanted to go there, but she finally showed me down. I found the place mouldy and in the centre a water-closet for the servants in which the water did not run, and that had been there a long time, a nasty pestilential mass, which was undoubtedly the cause of the typhoid fever in that house. Do you know how many things like that there are in the cellars of the houses of your patients? If you do not, you do not know the sanitary condition of those houses I am living in a house in New York which has recently been inspected by the plumber and every basin and trap in the house renewed. Every trap in that house was out of order being plugged up with sponge and small pieces of rag and burned matches. The very day after the new traps were put in I happened to go into the water-closet and I found floating in the basin a lot of burnt matches and a piece of sponge as big as my hand. These people were not Italians or Poles, put were cultured people. I commented on it and the lady said she thought it must have been done by an old lady in the house. On the very next day I happened to go in the closet; there was no light in it, and I found the gas had been allowed to escape by some careless person, when a certain physician, a friend of mine who was then in the house came running with a match. He lit the gas and threw the match in the basin. It was not the old lady who was guilty of throwing matches in the water closet.

Now if houses are foul what do you think of ships? You probably never have seen a Russian Jew when he starts for this county. He is a man who probably has never washed in his life; he is a man who certainly has worn the rags upon him as many years as these rags would hold together. You put that man in a crowded steerage, he becomes seasick, (this same thing applies to the women) he vomits, his dejecta are thrown out in that bunk, it becomes saturated with seasickness and then he becomes choleraic. Will you tell me what amount of cleansing will get that ship in condition again for a long time, except all such men are taken out and then she is thoroughly washed and cleaned? All these ships are damp ships. We are told that water is the very means of communicating cholera. We know in the navy that water has had a great deal to do with the spread of tubercles. It used to be the disease that prevailed in our service and the medical officers of the Navy for thirty years were fighting wet decks, and the last few years there has been no such thing as wet decks on board ship. If the atmosphere can support and transmit this aqueous vapor and with it the tubercle germ is it not possible that the same atmosphere can transmit that aqueous vapor and with it the cholera germ? I do not know whether Dr. Sternberg will agree with me in that, certainly I think if that aqueous vapor gets into the mouth in any way it will be carried down to the stomach. Imperfect sanitation is worse than no sanitation? Fumigation is as unfortunate a word as quarantine. I abominate the word quarantine, because it carries with it the idea of forty days' detention, and that I do not approve of; it would be better to call it sanitary non-intercourse. Fumigation is worse than quarantine because if you fumigate you burn something and you think you are perfectly safe. A friend told me he was in a house during a fumigation and as he did not feel inclined to move he stayed there and sat in the room and read a paper during all the time of the fumigation. There is a report in the papers of a ship which was fumigated, and after it was all over they found an old hen still sitting on her nest; and still another case where a cat was discovered having gone through the fumigation without being disturbed. Now processes of that sort are worse than none at all in that they give a feeling of protection when it does not exist.

Unfortunately commerce is the enemy of sanitation. Commerce opposes everything that sanitary officers and health officers try to do, and I am delighted when commerce is made to bow. I would carry out the President's proclamation to the very letter even if it obstructed immigration. There is a certain sort of immigration that we want to have in this country. Two years ago I came over from Holland with a party of young men and women who constituted the Holland American Land Company. They went out to California and bought some land there and domesticated. Those are the same kind of Dutchmen who settled in Brooklyn years ago, and whose names are left in your streets, the Brevoorts, the Remsens, and the Rapalyeas. A little stream mixes with us and is lost, but when you take the flood of sewage and pour it into our country, as is being done now, the whole mass gets muddled. Every insane asylum, every almshouse, every charitable institution contains them. If you open soup houses, what is the result? The indigent people do not get the soup, but it is these fellows that live on it. If steamships persist in bringing these people here, I hope it may be possible to take our own people who are coming home out of these ships and send the others back with their rags and with their disease.

Mr. President, I know I have not said anything you did not already know. Pardon me, therefore, if I now make a little practical suggestion, and in order to make this suggestion I was persuaded to intrude myself upon you. The first suggestion I would make would be that the Medical Society of the County of Kings print a circular on a single sheet of paper in as concise words as possible, to be printed not only in English, but in German, Italian, Russian and Hebrew and have that circular posted up by the authorities or the health officers in every tenement house and every other house, and send and distribute and put them in every establishment in this city, informing the people how to examine a house, how to inspect it, how to open their cellars, and to whitewash their cellars—what to do and how to do it. The second suggestion I would make, which is the most important, is that every medical man in the city of Brooklyn, and I would not ask to see their diplomas and if a stray irregular should creep in, even though it would be ethical treason, I would not except him—I would make every medical man in this city a sanitary inspector under direction of the Health Commissioner, give him his block or two, authorize him to go into these houses, rich men's houses as well as poor men's houses, and go from the attic to the cellar and see if they have done that which the circular has told them to do. I think that would be fulfilling the highest duty of the medical profession. Then you would give your health officer a hundred arms and he would not be limited to the very small force which he has and with which he does so much. Further, I would have every police officer compelled, while on his patrol, to examine the outdoor condition of things—the gutters, the corner grocery stores, looking down into their cellars to see that there be no decaying vegetables. If you do that I think that in one week you can put this city in a thoroughly sanitary condition, and you can defy the cholera and control the disease that has a germ so delicate that you can hardly help killing it.

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PRACTICAL SANITATION VS. DETENTION.

BY A. N. BELL, M.D.,

Editor of *Sanitarian*.

I do not think I can say a single word more than to emphasize what has been said, but I will venture to state that this occurrence of cholera without a national board of health of some kind, is no exception whatever to a national government without a board of health always doing harm and obstructing the health service. I look upon the action thus far as attempting to do that. I have entertained these opinions a long time and I may, I hope, be excused for the emphasis with which I state them, that commerce has been at conflict with the health administration of our government, with the exception of a few years when we had a government board of health, and it then did something to protect us. National interference, or state interference or city or municipal interference, without an effective board of health is ineffectual, aggravates and alarms public sentiment, creates undue excitement, even as this has here in New York and Brooklyn. The President's proclamation has done more harm than any act I know of since we heard that cholera had come to the port of New York. And it ought to alarm them; it is horrible to shut up in a ship for twenty days, or even one day, such immigrants as the doctor has described. The whole spirit of the proclamation means that a ship comes here with 1,000 people on board, and there may be one or a dozen or a hundred cases of cholera, and they are going to be kept there until they die—why the very thought of the thing seems like going back to what we read of in the middle ages, that we are afraid to take hold of them and cure them. Our business is to take every well man out and protect his life, and take the sick men out and disinfect the ship as soon as possible and give her to her owners. That is practical sanitation as opposed to the preposterous system of detention. I did hope and think we had gotten over it here in New York. Some of you here who are most acquainted with me know that I have for many years advocated practical sanitation instead of this murderous detention system. If a case should possibly come to Brooklyn, it would probably not come by way of the New York Quarantine. They may rate it third or fourth, but one single act of our present Health Officer at Quarantine, his system of disinfecting ships by steam, places it above Charleston or New Orleans, and I know something about both of these places. It is true that the system here has not been completed, and the work is not as perfect as it should be for the reason that the appropriation was scant and they undertook to do about $40,000 worth of work with less than half that amount of money. It is true that they have their steam plant imperfectly finished in many respects, that they have used porous brick which absorbs the steam and which should not have been used; it is awkwardly arranged in some respects, nevertheless, compare it if you please with what we had here five years ago. Some of you perhaps know what it was then. In looking upon the present condition, I would say it is incomparably safer than it was in 1887. The emergency was greater at that time and we are a hundred-fold better prepared to meet it now. I am very sure every one here present of the physicians of Brooklyn is ready to take such suggestions as have been heard or made to-night and that if a case of cholera comes here it will be closely watched and not a case will be allowed to escape.

With all respect to my friend, Dr. Gihon, I would say that many of the members of this Society would not make good inspectors and I have much more confidence in the trained inspectors at the Health Officer's command, and if he has not enough of them it is the duty of the city to give him more, and he should get the best of the Kings County Society, and he should get as many physicians as possible and have them trained and made competent, and then they will be able to see things under the bed and behind the curtains, and their inspection will be a thorough one.

PERSONAL EXPERIENCES WITH CHOLERA IN CHINA AND JAPAN.

BY E. S. BOGART, M.D.,

Medical Director, U.S.N.

I thought perhaps a brief account of the circumstances of an outbreak of cholera which occurred on board the United States ship Monongahela in the summer of 1878, which was quickly brought under control, might be of some interest. She was lying in the port of Shanghai with some 280 men on board in August, 1878. There was cholera on the coast in various places, although it was not known that there was cholera in Shanghai, no case having occurred among either the European or American residents, but there was a strong suspicion that there was cholera among the native Chinese. The ordinary measures for guarding against infection were observed, but at the end of August a case occurred late in the day which was recognized as cholera. The next morning another one, which promptly passed through the stages and died in the course of six hours. The ship was disabled from her engines and boilers being under repairs, but the commanding officer was advised to take the ship to sea under sail. We got under way at two hours' notice and sent the corpse of my second patient ashore. The ordinary measures of disinfection were carried out, carbolic acid was thoroughly used and no further cases occurred. Some of my patients got well and some of them died in about the usual proportion, but no cases appeared after leaving port. The removal from the infected locality with the men on board was effected and the ordinary measures of disinfection sufficed. The infection came on board notwithstanding all our precaution by means of some Chinese boys, I think, who were sent into the boilers for the purpose of scaling them and were not allowed to go in any part of the ship except immediately into the boiler and immediately out of it.

My second observation is perhaps more instructive and occurred in Japan in 1885 when the French fleet came in from Southern China in August after the close of the Franco-Chinese war. They had some cases of cholera and had lost their Rear Admiral. They claimed the fleet to be healthy. Not long after their arrival some cases of cholera occurred among the washmen who lived together on the shore and did the laundry work for the ships, and among the workmen employed in the dry-dock occupied by the ship, and the disease raged with great violence. On the part of the United States fleet strict quarantine was made against the shore and every possible precaution was taken to avoid infection, with one exception. The Ossipee at the end of August, when she was about to sail, took on board some grapes and with these grapes appeared to come the infection. I think within thirty-six hours after she left port the cholera suddenly broke out when she was in the inland sea and she was taken to a quarantine station at Kode where the men were landed in three parties. The sick, the suspects and the well. All the clothing, bedding and personal effects were subject to dry heat but the ship was steamed by her own boilers by breaking joints in the steam heating pipes of the different apartments and allowing the steam to escape. The men went back on board ship and she continued her course during that and the following year when cholera was rife in all the ports of Japan. In both of these instances the disease was very promptly checked and we had no more of it.

PRACTICAL SUGGESTIONS IN THE MANAGEMENT OF CHOLERA.

BY CHARLES U. GAVATT, M.D.,

Surgeon U. S. N.

I wish to thank you Mr. President and members of the society, for the courtesy by which I am allowed to attend and take part in the discussion of a subject so important as this. It is one which is engaging the interest and attention of the entire world, and as it affects you gentlemen of the city of Brooklyn, so it affects us at the Naval Hospital and the Navy Yard. Our interests in this matter are common, and, as I understand it, the purport and purpose of your meeting this evening is a comparison of views so as to formulate some definite plan of action by which your city and surroundings may be put into the highest possible state of protection. I will, with your permission, offer such suggestions as a limited experience with cholera may prompt. My belief is that even should the cholera pass the barriers so zealously guarded by the health officer of the port of New York, or should it slip by Hell Gate or creep in along our almost unprotected and vast Canadian border, in view of the lateness of the season, I do not believe it would prove to be of a very virulent type, or perhaps be very widespread before being effectually checked by cold. This consideration should not lead to any relaxation of watchfulness or precaution on our part, for the history of cholera shows that where it has gained access into a country, in this country and in others, in the closing months of the year and become dormant during the winter, it has invariably sprung into activity during the warm weather of the following summer and gone on with its ravages. Therefore, simply because it may prove itself harmless this winter is no cause why we should relax a precaution that is to keep out a danger that menaces the city and the country. Thousands of valuable lives may pay the penalty for any want of attention now. Your Health Officer alluded to the panic that has already taken the city of Brooklyn and one that always appears upon the approach of cholera. My impression is that one of the very first and most important things to be accomplished is to allay this very panic. This can best be done by the medical profession instructing and acquainting the people generally with the true nature of the disease, its mode of propagation and dissemination. Let them understand that the atmosphere is not permeated by germs that endanger their health, but that in the vast majority of cases the air may be thrown out of consideration almost entirely. The source of danger is food and water that have been contaminated by the careless attention or perhaps no attention at all to the gastric and alvine discharges of the sick, or to the careless handling of the bedding and linen that have been soiled by them. Let the people know that it is non-contagious, that attendance upon a case of cholera with strict attention to cleanliness, which by the way if it ever came close to godliness is in connection with this plague, is no more dangerous than a case of typhoid fever. Let the people understand these things, and when your authorities demand the destruction of property or demand their co-operation instead of attempting as they so often do to oppose these authorities, you will find that they will assist them cheerfully, and the popular panic being allayed one of the very first steps to successfully combating the disease has been gained.

The division of a city into sanitary districts is to my mind one of the most important. Your Health Officer has told us he now has five sanitary districts with I think sixteen assistants. With a population of nearly a million I think that this is not sufficient. The area under the control of each sanitary inspector should not be so great that he could not be thoroughly familiar with every nook, corner and cranny of his district, and that he may go over it at least once in two or three days. This inspector should be under the control of the Board of Health or the Commissioner of Health, whichever is the recognized authority in the city, and every doubtful case ocurring in that district should be reported to the Health Officer, and if he is satisfied that it is cholera, or if he is in doubt, that case ought to be if possible promptly removed to a hospital prepared for the purpose. I very much question the wisdom of having cholera scattered through your city in the various hospitals. I know not what the hospital accommodations of your city may be, but there should be for diseases like this one place where the infected patients could be carried and kept there in strict surveillance and quarantine. This brings me to the next point which I wish to make, namely, the establishment of an ample and efficient ambulance corps. It will not do to have the sanitary officers at one end of this large city have to wait until an ambulance can be sent from the other end. There should be several ambulance stations with a sufficient number of ambulances which should be under the control of each of your sanitary inspectors. Where it is impossible to move a patient to the nearest hospital, the bedding, clothing and linen that may be soiled by that patient should be removed and taken to a disinfecting apparatus which should be in connection with this hospital. It is not necessary to destroy every article of clothing, notwithstanding the suggestion made by the last speaker that every article should be destroyed. It means loss that is unnecessary, and as Col. Sternberg has so clearly shown that the spirillum of cholera is easily destroyed, the normal death point being 125.6 F.° there can be no necessity for destroying bed-clothing and other articles of very great value to the people, but there should be a certain depot for this purpose at which they should be disinfected by live steam. There are many contrivances very admirable for the purpose, particularly one recommended by Gibier. In every case of disease all discharges and soiled linen should be immediately put in a vessel prepared for the purpose, containing a certain amount of the disinfecting fluid. The disposal of the dead is another practical question, and you have a crematory in Brooklyn which is by all odds the best one. If that is not used, each body should be well wrapped in sheets wet with bi-chloride 1-500, or carbolic acid of sufficient strength, before removing.

The question of treatment has not yet been brought forward and I have nothing to say on that point. I would like simply to call to mind that in times of war the country looks to its soldiers for protection; but in seasons of pestilence as this may be, it turns to the medical profession expectingly and hopefully. Then let us well deserve its praise, and so fulfil the high obligations resting upon us, that hereafter neither conscience nor a stricken city may charge us with neglect.

CHOLERA EPIDEMICS OF 1848 AND 1854 IN BROOKLYN.

BY ANDREW OTTERSON, M.D.,

Ex-Commissioner of Health.

Before mentioning my experience in these epidemics I wish just for a moment to supplement the remarks of Dr. Gihon. There is a radical defect in the construction of this whole city. There is scarcely a cellar in a dwelling house in this city but what is more or less a source of danger to all who are above it. That might very easily have been remedied in the past and it can very easily be remedied in the future, but we must look to the architects to do it. I would suggest in every cellar, and more especially in the houses that are built for a plurality of families, that a good old-fashioned fire-place like those we had in the old times, large enough to put in a whole log at a time, with a flue all the way up to the roof, be built in every cellar. The whole of the atmosphere of that hole in the ground would then be constantly changed. I have been in many cellars in my official capacity under the very best houses on the Hill, the Park slope and in other places, and I have never found a fire-place. It is an oversight of the architect in not providing for the health of the cellar first—the rest of the house would then almost take care of itself.

After all that has been said it seems superfluous to me to say anything more. I have seen cholera in this city and nowhere else. The literature of the subject is plentiful and everyone is interested in it now, more particularly our profession, and they are all full of the literature and rely upon it. What I would say is with reference to the city of Brooklyn proper. I do not take in the Eastern District, or what is now known as Williamsburgh, because I had no knowledge of it at that time, merely going there occasionally with some medical friend, which did not amount to anything. The city line of Brooklyn was then drawn along the Navy Yard wall and Flushing Avenue, the city line on the north being Wallabout. In 1848 I first saw the cholera; I was then a young practitioner of four years' standing. There was just the same excitement as there is now, the papers were full of it, the people were full of it and were constantly coming to us and asking what they should do. They are beginning to do that now, and I dare say that every man here has had the same kind of experience. To answer that question I would refer them to our Health Officer, and if the provisions and plans and directions given are faithfully followed, they will have a prophylaxis equal to anything else we can have to offer. But notwithstanding all that these gentlemen have brought before you in regard to cholera and the germ theories not known in those days, and all the wonders of science, now I am brought here before you to carry you back to 1848 and the first case I ever saw. A neighboring practitioner stepped into my office one morning and said he had a case of cholera, that he had seen it that morning and that he wished me to come and see it. Of course I went, but with fear and trembling. We had a plurality of older gentlemen with us then, men in active service who had come through the first epidemic of cholera in 1832, and while they had no absolute theories of the condition of things, they were able to give us many suggestions and we relied upon them and found them useful. They were entirely without the science of the present day, as we were entirely without a great many things that we have now. We had no clinical thermometer, the hypodermic was not known, and how many of us can tell how far this thermometer will indicate the approaching collapse. Who can tell what our therapeutics will be when it is administered by the hypodermic? Those are strong points which we may have to avail ourselves of now and which were then unconceived. This disease went

on spreading from place to place, from time to time in the city, and the mortality was greater in the plainer and poorer classes in the city. It spread, however, among the best houses, and members of our best families were taken. The doctors had no specific treatment; some said "give them calomel until they have dark stools," but they never had dark stools and died before the dark stools came. Other specifics were offered and with about the same result. I do not know but the mortality was larger than in any of the subsequent seasons.

The next epidemic was in 1854, and what did the city do? They immediately provided a hospital. It was the building attached to the hat factory, a large brick building at the corner of Willoughby and Raymond streets. Dr. Swift, who recently lived at the corner of Grand Avenue and Lefferts Place, was put in charge of it. All that was called for by the profession was provided for, and a large number of patients were treated there. I have not been able to find the records, but I presume they are still extant. One curious thing connected with that hospital I recall. One morning a foundling was brought in, a child of uncertain age, which was in the collapse stage of cholera. It was not cold from exposure, the tongue was blue and it was cold through and through. It had the muscular contractions which come on in the advanced stages of cholera, but that valuable member of society was saved. A hot sponge-bath, dry hot vapor and other therapeutic remedies saved the child's life and it grew. Its subsequent history I am not familiar with. A little later and toward the latter part of the season the prisoners in the jail across the street had the cholera. It was announced to the public on Saturday afternoon and there was a terrible panic. What are we going to do, they said, if all those prisoners are turned out? I am glad to say that it did not extend outside of the grounds and there were not more than eight cases there, some of which were fatal, but there was no question about its being the Simon-pure cholera.

When it came down to 1866, the authorities established one hospital in the City Park in the 5th Ward, down by the Navy Yard, and another one in Hamilton Avenue in the 12th Ward, and I think the gentlemen attached to these two branches of the one hospital are present here or have been through the evening. During all this time the almshouse at Flatbush had a large number of cases taken there, and the physicians there did laborious and faithful service. They had some mortality and I presume their records are extant. We observed here in 1854–'55–'56 that the low temperature modified the progress of cholera, and yet cases spread over during the summer and a few cropped out in one or two subsequent years, but during the end of 1856, as late in the year as October 13th, the Warden or Superintendent of the Almshouse at Flatbush died of cholera. I presume the gentleman who attended him is within the sound of my voice. Now there was a gentleman in middle life, firm in constitution, who never had any exposure to the disease so far as known, and who was in very many respects a model man. The disease had gone through the summer and all the hospitals were closed, and it was supposed to be through with, when this valuable man, to the surprise of everybody, was taken with cholera and died shortly. Just at that time a canal boat came from the central part of the state to discharge her cargo of wheat at Jewell's Wharf,and the son of the captain was taken with cholera. They did not recognize the gravity of the boy's condition and he was merely laid upon some boxes and covered with a bag. When I saw him he was in collapse and in that condition he died. That case was impressed on my mind by the fact that there was quite a conflict between the friends of the boy and the Health Department here for permission to transport his body to his native place for burial. It was not done, however, and he was buried here.

The hospital of 1854 was located at what is now nearly the corner of Flatbush and Lafayette avenues, on the Powers' estate and in the old Powers' house. Dr. Joseph C. Hutchison, whose name is fragrant with us all, was put in charge of that hospital and he did laborious and faithful work there. He was a great enthusiast in what he undertook, fruitful in expedients and, perhaps, the best man on this end of Long Island for that position. Along with the other treatment then in vogue with greater or less success came up the method of supplying the drain upon the system, the restoration of the serous portion of the blood by the transfusion of a saline solution. Dr. Hutchison had an instrument procured for that purpose and used it there, and I presume that instrument is still in his armentarium, now in the family. It was as late as July 10, 1880, when I had occasion in his neighborhood in Clinton Avenue to ask the loan of it. I was at the bedside of a lady comatose from post-partum hæmorrhage and I thought of transfusion. Remembering the old instrument I had seen Dr. Hutchison use so often, I borrowed it and with the assistance of Dr. Fearn, so recently deceased, I transfused blood from her husband into the woman and she is alive to-day. All the cases where transfusion was used were not saved, but many of them were. Dr. Dawbarn now recommends the plunging of the needle into the femoral artery with the saline solution, in such conditions. Well, I am not plunging any needle in the femoral artery.

We also had an epidemic in 1866, in which I took part, but which will be described by Dr. Colton.

The idea of treatment, so far as I have been able to obtain it from the literature and from personal observation, seems to be about the same as it was a quarter of a century ago. First, arrest your diarrhœa if you can. The calamity is that we do not see our cases until that point is passed; if cases could be seen at the inception of the diarrhœa the mortality would be less. After that period shortly comes on vomiting, and when it comes to the spasm of the muscles, you can depend that the doctor and the patient have a mutual contract that is hard to fill. These cramps are fearfully destructive to human life and it seems as if they forced the discharges from the bowels with great violence. I have in mind a man who lived on what is now Fleet Place who was taken with cholera. The spasms were so great that he became stripped and lying in that position these discharges were thrown against the wall and flowed down as if they had been thrown from a pump or a steam syringe. It attracted my attention and made a peculiar stain on the wall. That afternoon I went to Peekskill to see a lady supposed to have cholera, which I found to be green-apple cholera. I simply prescribed castor oil and paregoric and told her to let the apples alone. The next day on arriving in Brooklyn by boat I found that my man was dead. That peculiar violence of the dejection from the bowels was a peculiarity of the disease, which appeared before the other violent symptoms had set in. Those who saw it recognized it as a very bad symptom. I was called into that house months afterwards, when that peculiar lead-colored stain was still on the lime wall. The occupants did not know what it was, but I did.

If I were to see or suspect a case to be cholera, I should adopt the same plan now, in the present state of my mind, that was adopted and handed down to us by the older practitioners. If you can, get the patient to bed at once, lay him down flat and keep him there, not an hour or two, and then because he says "the boss has sent for me and I have got to get up and go out," let him get up. If he does that he will either stay out of it or in it altogether. If you can keep him in bed, give him warm drinks, which will satisfy his thirst and are better than cold ones, check his diarrhœa if possible. I believe with the facilities we now have, with such surroundings as we could now give our patients, such treatment would be sufficient. I do not know whether it would check it entirely, but we have an additional aid in the use of the hypodermic which, however, I hope none of us will have the occasion to prove, but it would be a good way to administer certain remedies. When the patient begins to vomit the belly caves in and you can stand by and see the pulsations of the aorta all the way down to the symphysis, and yet he is in a dying condition. When that condition comes on, cold feet, washer-woman's hands—hands that look as if they had been in hot soap-suds over night—sunken eyes, tongue cold and blue—in that condition it is an awfully difficult thing to rouse them. They go down into that state of coma and it is almost invariably a state of death. Some have gone so far as to think the patient is dead when in that state and have allowed him to lie there until his face is black. But sometimes, when the vital forces have been at this very low ebb, the physiological pendulum, if I may use the term, vibrates in the other direction, and they do occasionally come out of this mysterious condition. If they do, then you have existing exalted action and violent congestion and very often congestion of the brain, and when they do not die of the original primary cholera, they are apt to die from the secondary effects, to wit, congestion of the brain. Patients were bled sometimes in that condition and saved thereby. A similar condition appears in the coma which follows sunstroke, and in the Long Island College Hospital a similar case to that was brought into the presence of the late Dr. Armor, and he bled the patient and the man recovered. I believe that some of these people that go into that state of cerebral congestion, if treated with leeches and cups and applications of ice to the head and the circulation immediately restored, might be saved.

If you can check the diarrhoea and prevent your patients from vomiting, every minute is salvation for your patient, for every minute that he is vomiting aggravates his danger. If you can prevent vomiting you can perhaps tide over this condition which otherwise will ultimately go into collapse, and as soon as they do go into collapse the margin is very small.

What the therapeutic lines shall be, I am not here to determine. I think sometimes the congestions occurring after the collapse were due to over-stimulation by camphor. There is an excitement and panic that strikes the profession in these cases, and if a little of a certain thing was desirable, they reasoned if they gave more of it they would be more likely to save the life of the patient, and they sometimes overdo the matter.

Another peculiar thing is that after the apparent death and the real death, these muscular contractions are very apt to continue for a time, not very frequently, perhaps, but not infrequently they occur, and so violently that an arm or a leg will be moved long after we supposed it was in its everlasting rest. I have in my mind a man who lived on High Street, near the Navy Yard. He was a spar-maker and went to his work one morning, was taken sick there, came home, died in the middle of the afternoon and was laid away. When his wife went in to look at him after he had lain in his coffin some time, his arm had moved from the place in which it was when he was laid out, and when she looked at it she said "Why, Jim is not dead, look at his arm," but I convinced her that he was dead. This contraction of the muscles that continues is a species of convulsion dependent upon the full depletion of the body, I think, just as in the shambles the animal bled to death dies in convulsions or immediately after the convulsion. If this is the explanation, an injection or transfusion or anything else can supply that deficiency that has taken place, if you can introduce it into the system and keep it there long enough to be assimilated, I think it would have a capital effect, but it has to be done early before they get into the state of convulsion, which is, I am sure, fatal. These spasmodic effects that occur after death, post-mortem effects you may say, are not a matter of any significance at all. They are negative entirely, and if they have any influence at all, or any significance at all, the only significance is the supremacy of disease and the victory of death.

CHOLERA EPIDEMIC OF 1866 IN BROOKLYN.

BY F. H. COLTON, M.D.,

Sanitary Inspector in the Metropolitan Board of Health.

During the summer of 1865, cholera was epidemic in Western Europe. In November, the steamer "Atlanta" arrived from Havre with cholera on board. At this time the quarantine gate was in a dilapidated condition, and the cities of the port were without any efficient equipment for repelling an invasion of disease.

Two years previously a citizens' movement was inaugurated in New York, looking to a radical change in the management of sanitary matters.

As a result of this movement the Metropolitan Board of Health was established by act of the legislature. The act was entitled, "An act to create a Metropolitan Sanitary District and Board of Health therein, for the preservation of life and health, and to prevent the spread of disease." This act was passed Feb. 26, 1866. On the 5th of March the Board was fully organized and ready for work. The Metropolitan Sanitary District comprised the counties of New York, Kings, Richmond, and I think, Westchester.

The board consisted of Jackson S. Schultz, President, Drs. Willard Parker and John O. Stone for New York, and Dr. James Crane for Brooklyn.

The board was organized not a moment too soon, for in April and May the steamers "Virginia," "England," "Peruvian," and other emigrant vessels with cholera on board cast anchor in our harbor.

Dr. Edward B. Dalton was appointed Sanitary Superintendent and Dr. Elisha Harris, Registrar of Vital Statistics.

Dr. J. T. Conkling was Assistant Sanitary Superintendent and Dr. R. Cresson Stiles was Assistant Registrar of Vital Statistics, with Brooklyn as their field of operation. New York was divided into seven, and Brooklyn into five sanitary districts, which were each given in charge of a Sanitary Inspector.

The police department was in cordial sympathy and co-operation. This was the first time in the history of the cities that sanitary matters had been given the consideration that their importance demanded. Consequently the Board found a herculean task before them. Their work was not only the practical one of cleaning the cities, but it was an educational one as well.

As I have said, cholera reached our port again in April, no ill consequences having followed its arrival in November, due probably to the lateness of the season. On the first day of May the first case occured in the Metropolitan District.

A woman died in an old shanty on Ninety-third Street, east of Third Avenue, after an illness of one day. No connection could be established between this case and those on the emigrant ships. In fact the first ten cases, excepting two, were at far separated points, and though diligent effort was made none of them could be traced to the ships or the emigrants or to each other. This is not saying that there was no such connection, for as already indicated the quarantine gate was in an untrustworthy condition.

In Brooklyn the first case occured July 8th, in the 12th Ward. It was in this ward also that the disease raged with the greatest violence and virulence during the prevalence of the epidemic.

The table on page 35 will show the progress, culmination and decline of the epidemic.

		Number of cases.
Week Ending	July 13	14
“ “	“ 20	42
“ “	“ 27	53
“ “	Aug. 3	83
“ “	“ 10	161
“ “	“ 17	132
“ “	“ 24	80
“ “	“ 31	47
“ “	Sept. 7	81
“ “	“ 14	28
“ “	“ 21	44
“ “	“ 28	25
“ “	Oct. 5	5
“ “	“ 12	5
“ “	“ 19	12
“ “	“ 26	3
Five (5) Days.	“ 31	1
	Total,	816

The following table shows the number of cases by wards.

Wards.	CASES JULY.	CASES AUG.	CASES SEPT.	CASES OCT.	TOTAL 4 MOS.
First		9	1	1	11
Second	6	14	4	3	27
Third	3	4	1	1	9
Fourth	3		1		4
Fifth	5	18	7	1	31
Sixth	10	32	17		59
Seventh	4	7	1		12
Eighth	7	27	3		37
Ninth	17	15	63		95
Tenth	5	20	7		32
Eleventh	6	76	9		91
Twelfth	77	189	21	1	288
Thirteenth		1			1
Fourteenth		3	3		6
Fifteenth	0	0	0		0
Sixteenth	1	1	5		7
Seventeenth	2	2	6	4	14
Eighteenth	2	1			3
Nineteenth	1	1	2		4
Twentieth		11			11
Town of Flatbush	1	24	27	14	66
“ “ Flatlands	1				1
“ “ New Lots	1	2			3
“ “ Newtown		3			3
“ “ Gravesend			1		1
	152	460	179	25	816

The large number of cases in Flatbush is explained by the outbreak of cholera in the penitentiary.

The whole number of deaths was 573, of which 288, or forty per cent. were credited to the 12th Ward. The violence of the epidemic in this ward was due, probably, to the low level of the land, the consequent imperfect drainage and sewerage, and the fact that it is mostly made ground and made, too, of the most composite and unwholesome material; added to this was the character of the people—poor—dwelling mostly in tenement houses—ignorant for the most part of the laws of health—and constantly violating those they did know.

Two hospitals were established for the reception and treatment of the sick. A large brick building formerly used as a market, at the corner of Hamilton Avenue and Van Brunt Street, was seized under the protection of the police.

Dr. William H. Thayer, one of the sanitary inspectors, was placed in charge, assisted by Dr. P. N. Schenck. Eighty-two cases were received here, of whom fifty-eight died. Of the fifty-seven cases received during the second stage, fifty died.

The other hospital was a temporary building erected in the City Park by authority of the Board of Aldermen. Dr. W. F. Swalm was placed in charge. Twenty-eight patients were received for treatment, of whom eighteen had cholera and of these eighteen, eleven died.

The Health Office was kept open night and day. The sanitary inspectors relieved each other for night duty, two being on duty all the time. Cots were provided for their use in the intervals of active service. The public was invited to notify the office at once of any suspicious case in any part of the city. An invitation of which it took immediate and full advantage, and often to the great disgust of the weary inspector who hurried out on many a fool's errand.

The streets of infected districts were constantly cleaned. Gutters were washed with fresh lime. Sewer basins were emptied and disinfected. Sewers were flushed and a crusade was begun against the old-fashioned, loosely constructed vaults and cesspools in the back-yards, which then honeycombed the city in the better as well as the poorer sections. The markets were closely watched, and unripe or decayed fruit and vegetables were confiscated in large quantities and destroyed.

As to treatment of cholera in this epidemic I need say but little as there is so little to be said. The 573 deaths out of 816 cases shows the results of treatment were very unfortunate. The fifty deaths out of fifty-seven cases of collapse received at the Hamilton Avenue Hospital show that no treatment at all would have been well-nigh as successful as that adopted. I saw Dr. R. Cresson Stiles inject artificial blood-serum into the veins of several patients. In every instance the heart would beat stronger—the pulse would return at the wrist and a pink tinge re-appear on the lips. But the improvement was only temporary, and death soon closed the scene. In the hospitals the dejecta and clothing were promptly disinfected with carbolic acid and chloride of lime. In the homes of the sick instructions were given, but from the nature of the surroundings and character of the occupants they were, I fear, but poorly obeyed.

The good work which the Metropolitan Board of Health inaugurated has been permanent and has been added to as the years have gone on; though the form of organization has been changed and changed again many times.

Quarantine equipment has been vastly improved. Swinburne and Hoffman islands with their hospitals, their disinfecting facilities and their crematory have replaced the one rotten hulk of former times.

Popular education and interest in sanitary science have advanced wonderfully—and last, and perhaps above all, the microscope and the laboratory have determined the true etiology of cholera. The facts, therefore, fairly warrant the conclusion that the gloomy story of 1832, 1849, and 1866 will not be repeated in these cities.

PREPARATION OF THE CITY OF BROOKLYN FOR THE ANTICIPATED EPIDEMIC OF CHOLERA IN 1884 AND 1885.

BY JOSEPH H. RAYMOND, M.D.,
Ex-Commissioner of Health.

In June, 1883, cholera was announced in Egypt, at Damietta on one of the mouths of the Nile and spread to other cities in Egypt.

In the same month the disease appeared at Toulon, Marseilles and Paris in France and later in Italy. It is stated by Wendt that the epidemic cost France and Italy 40,000 or 50,000 lives and many hundreds of millions of money. Later it prevailed in Spain, attacking thirty-three provinces. There were reported 273,549 cases of which 101,346 proved fatal.

The widespread prevalence of cholera in Europe in 1883 and 1884 and the history of previous epidemics alarmed the sanitarians of the United States and it was the general opinion that we could not escape a visitation. A conference of State and Municipal Boards of Health was called to meet in Washington, D. C., December 10, 1884, to consider the subject of cholera with reference to its threatened appearance in the

United States in 1885, and to adopt measures to prevent its entrance if possible; or should these be unsuccessful, to reduce its ravages to a minimum.

Health officers were requested to present reports stating what had been done in their respective localities to prepare for its probable advent. In accordance with this request the writer reported what had been done in Brooklyn and offered certain recommendations which embodied the principles on which the Brooklyn Department had acted, and it is flattering to Brooklyn to know that these recommendations were subsequently adopted by the Conference and promulgated as guides to all municipal authorities.

In order that the history of the actual and threatened invasions of Brooklyn by cholera may be complete, President Emery has requested me to state what measures were taken by the Department of Health in Brooklyn in the years 1884 and 1885.

The principles which guided the department and which formed the recommendation referred to and the work which it did are herewith submitted.

FIRST.—*That all surface wells should be closed at the earliest possible moment; and that great care should be taken that the water supply of all cities, towns and villages shall be of undoubted purity.*

For some time the efforts of the Department of Health had been directed to closing up the wells of the city which at the outset of the undertaking numbered three hundred and sixteen, varying in depth from fifteen to one hundred feet. An analysis of the water of these wells showed that of the whole number but seventeen furnished water fit for consumption. These were, of course, liable at any time to become contaminated. As a result of these efforts all the wells, but one, were closed.

As the water supply of Brooklyn came from the country at a distance of twenty miles from the city, and as there was danger of contamination from stables, slaughter houses and privies along the bank of the stream special inspection was made of these sources of danger, and the nuisance, wherever found, abated.

SECOND.—*That all privy vaults be abolished wherever water-closets can be supplied; and that wherever the existence of such vaults is necessary that they should be rendered water-tight in such manner as to prevent saturation, not only of the ground surrounding them, but also of the materials of which they are built; and that the contents of such vaults should be kept constantly disinfected, and removed to a proper place at frequent intervals.*

A census of the privy vaults in Brooklyn was made in

1878, showing that at that time there were 25,000 of these abominations within the city limits. Of this number 14,000 were not water-tight, but were built of stones loosely placed together without cement. Thousands of these had been done away with during the interval between 1878 and 1884, and all that were in lots adjacent to sewers were under orders for their abolition. There were, however, 11,000 additional privies which were built of brick and in accordance with city ordinances. Experience had shown that these structure were intolerable nuisances, the human excrement accumulating and decomposing in them, giving off offensive odors and saturating the porous brick of which they were composed. Nothing but the abolition of all privies would abate the nuisance, and an amendment to the ordinances was asked for to compel this in all cases where sewers existed and to require the substitution of water-closets, and where there were no sewers, such vaults were to be filled after their contents had been disinfected and removed, and new vaults constructed so as to minimize the danger as much as possible. Special police force was obtained to make repeated examinations of the existing vaults, the exact location of which by street and number was known. The disinfecting officers of the Health Department attended to the disinfection of all vaults reported as offensive. The necessity for this work will be readily appreciated when it is stated that in the years 1884 and 1885 notwithstanding the abolition of thousands of vaults, 586,202 cubic feet of night soil were removed from the vaults of the city.

The old-fashioned method of emptying privies had been prohibited and the so-called "odorless" was the only one permitted. The night soil was removed to farms and utilized as fertilizer, but arrangements were made by which, had cholera come, this would have been discontinued and the material would have been carried to sea in boats. This latter method of disposal was adopted in August, 1885.

THIRD.—*That all stagnant ponds should be disinfected, and when possible the water removed by drainage or pumping, and the further accumulation prevented by filling with fresh earth or other material free from garbage or other filth.*

The epidemic of cholera which visited Brooklyn in 1866 was especially marked in the 12th Ward. Dr. J. T. Conkling reported that in June, 1866, and the early part of July, cases simulating cholera occurred, but the first reported case happened July 8th. Its increase at first was not rapid and mostly confined to places where there was the greatest amount of filth, especially in the southwest 12th Ward, which had many depressed lots and ponds of foul, stagnant water. Some of the houses were built on piles in sunken places filled with garbage and other foul stuff. Of the 816 cases which occurred in the city, 288, or more than one-third occurred in that ward. To this part of the city attention was therefore naturally directed. This section is to a great extent composed of filled-in ground, being originally covered by salt water, with marshes and islands interspersed. In its improvement streets were constructed in such manner as to leave between them ponds of water, which being stagnant, soon became offensive. During the season of 1884 and 1885, twenty-three of the ponds in this ward were drained and filled; in the whole city there were fifty-nine filled at an expense of $35,108.85. The material employed for this filling was in every case fresh earth or clean ashes, no garbage or other decomposable matter being used in a single instance.

FOURTH.—*That great care should be exercised to keep at all times clear and free from obstruction all sewers into which passes the refuse from dwellings, factories and other buildings; and that such examinations should be made as will detect imperfect plumbing in all buildings and the defects immediately corrected.*

The efficient Superintendent of Sewers had thorough and repeated examinations of the sewers made, and the plumbing inspectors of the Health Department were constantly on duty in the examination of dwellings and factories.

During the two years the inspectors made 11,622 inspections of the plumbing in old houses.

The large sewer on Third Avenue, seven feet in diameter, which for so many years had been depositing its filth on the low land at the foot of Twenty-eighth Street was completed in the summer of 1885. To remove as much of this deposit as could be reached, a dredging machine was put to work and did valuable service.

FIFTH.—*That extraordinary care should be exercised in reference to all tenement houses, lodging-houses, and in general all places where large numbers of human beings congregate; that no accumulation of garbage or other filth be permitted in cellars or yards; and that frequent and thorough cleaning and whitewashing of such structures be required; and that householders should frequently and thouroughly examine their yards, cellars, closets and other out of the way places, to see that no filth of any kind has been deposited there.*

As sailors coming to the city were liable to find their way first to the lodging-houses, special attention was directed to these. Nine of them with 532 beds existed in the city. These were thoroughly examined from cellar to attic, and when defects of plumbing, ventilation or overcrowding were found these were corrected. The disinfecting corps disinfected them thoroughly, and it was made a part of the inspectors duties to visit them often. The proprietors were summoned to the Health Office and instructed as to the necessity of cleanliness and of prompt notification to the Health Officer of all cases of sickness.

The frequency with which disease has been spread by rags made it important to have these under surveillance.

A census showed that there were 279 places in which rags were stored. In order to have the necessary control over them, the following ordinance was passed. "Section 188. No person engaged in buying, selling or storing skins, hides, rags, bones or similar articles, or who has become possessed by purchase or otherwise of skins, hides, rags, bones or similar articles, for the purpose of selling the same, shall store or keep any of said above mentioned articles within the limits of the city of Brooklyn without first obtaining a written permit so to do from the Commissioner of Health of said city, the terms and conditions of which permit shall be strictly complied with by the person obtaining the same." Of the 279 places, 113 were permitted to continue, the others were ordered closed as being unfit places for the business.

SIXTH.—*That the food supply be vigorously watched to exclude from the market all unwholesome meat; all milk adulterated or from diseased animals; and all unripe fruits and vegetables; and that cow stables be kept, at all times, clean, well whitewashed and free from all excremental accumulations.*

It is conceded that the food supply during the time of a cholera epidemic is an important agent in the predisposition of individuals to attacks of the disease, the liability of contracting it being greater when, for any cause the alimentary canal is in an abnormal condition. It is also known that the ability to withstand disease is greater in those who are well nourished than in those who are debilitated. My experience leads me to the opinion that a very much greater proportion of diseased animals is killed at slaughter houses than is generally believed. No inspection of meat is complete unless it occur at the slaughter houses and before the viscera are removed. Many cases of tuberculosis were detected by the meat inspectors because they were able to examine the viscera at the slaughter houses which would never have been recognized had an examination of the carcasses alone been relied on. During the year 1884 and 1885, 436,669 animals were slaughtered in the city and the amount of meat condemned as unfit for food at slaughter houses and butcher shops was 169,956 pounds. During this period 139,470 quarts of milk were examined by the milk inspectors, of which 6,433 were either watered or skimmed. They were 5,593 inspections were made of cow stables.

SEVENTH.—*That all garbage, kitchen and household refuse should be promptly removed from dwellings, stores and other buildings to a proper place where it may be destroyed by fire or otherwise disposed of in such manner as to occasion no nuisance.*

EIGHTH.—*That such material should never be used in the filling of lots or disposed of by throwing the same in streets or vacant property where it may decompose and exhale offensive and deleterious gases.*

Vacant lots have always proved a standing invitation to householders and others who have filth to dispose of. To keep such spots in an inoffensive condition a force of thirty-two men with eighteen carts was kept employed from May 15 to December 1, 1885, in removing such filth wherever deposited, in streets, vacant lots or yards. Three thousand nine hundred and sixty-two loads of such material were removed by boat to sea. The cost of this service was $9,128.89.

NINTH.—*That in view of the practical results reported by that eminent sanitarian, Edwin Chadwick, Esq., C.B., the authorities of all public institutions, and individuals as well, have their attention drawn to the great importance of the personal cleanliness of the persons committed to their charge, as one of the most efficient means of warding off an attack of cholera, and of reducing its force when once it has appeared.*

Sir Edwin stated at a meeting of the members of the Association of Public Sanitary Inspectors that "Whilst much preventive service may be effected by cleansing of places, very extensive prevention may be effected by active measures for the cleansing of persons. At the last epidemic visitation of cholera, which fell severely upon Limehouse, the children of the pauper half-time school there were distinguished by their entire exemption from any choleraic attack. The distinction was due to the careful head-to-foot washing with tepid water. The like distinction of immunity was presented in other half-time district schools in the metropolis. Indeed, we had experiences of its efficiency in ordinary times, which enables me to predict it as a factor of at least one-third in sanitation." He further says "That the most efficient preventives of cholera are the effectual cleansing of places and of persons."

The American Public Health Association at its meeting in St. Louis, October 1884, appointed a committee to examine the subject of disinfectants, antiseptics and germicides, in their relations to preventive medicine and sanitation, and directed them to formulate a table of these agents for the information of those interested, the agents to be classified, so far as may be deemed advisable, according to their specific virtues, facility of application and economy of use. This committee began its work at once, and although its final report was not made until November, 1887, yet preliminary reports were made in December, 1884, and in 1885, at the request of the State boards of health. The recommendations therein contained were made the basis of the circulars of disinfection issued by most of the official bodies throughout the United States. The Brooklyn department thoroughly revised its methods in this respect, and issued the pamphlet entitled "Restriction and Prevention of Diphtheria, Scarlet Fever, Measles, Cholera and other Contagious or Infectious Diseases," which has been in use in the department since that time.

I might also add that during the summer of 1885 the Health Office was kept open day and night for the reception of reports of suspicious cases, should any such occur.

In reference to the provision of hospitals I will say that while such acommodations would doubtless have been necessary in case the disease had appeared, for there would be many who would be inmates of lodging or other houses where they could not be properly treated, still the removal of the sick should for their sakes be avoided as much as possible, and as recommended by the English College of Physicians, "Hospitals should be numerous rather than large, and so distributed as to make it unnecessary to convey to any great distance those who are stricken with disease." Those stricken with pestilential disease have rights as well as those who may escape, and it is an absurd contradiction for us to recommend that a patient should at once be placed on his back and kept absolutely quiet, and at the same time insist upon removing him to a hospital which may be at a considerable distance from his home. Such a practice unless there are grave reasons requiring it is, to say the least, inhuman. The transportation down flights of stairs and over rough pavements has undoubtedly caused death in many cases. So far as possible patients should be left at home, and the well removed, and the house regarded as an infected place to be kept constantly disinfected. Of course this is an individual opinion, and the subject is one on which differences of opinion may well exist. On this point Sir Edwin Chadwick says "that the fatality of pronounced attacks is aggravated by removal to large hospitals."

The total amount of money expended by the Health Department in anticipation of cholera over and above the regular salaries and expenses was $56,735.83.

I would not have it understood that the sanitary work here recited was confined to the years 1884 and 1885. While this is true of much of it, it is not true of it all. This report includes so much of the usual work of the department as in my judgment had a direct bearing on the preparation of the city and its inhabitants for the advent of cholera. None of it was work which should not be constantly done by a department of health, and I am inclined to believe that although it called for a greatly increased expenditure of money, yet that the results in the increased cleanliness of the city were so evident to the eye and so gratifying, that a department that should adopt such a course as it would pursue in times of threatened invasion of epidemic disease, as a part of its usual and ordinary routine, would be sustained by public opinion.

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TREATMENT OF CHOLERA.

BY JOHN A. McCORKLE, M.D.,

Professor of the Principles and Practice of Medicine, L. I. College Hospital.

The President has requested me to present a brief *résumé* of the general treatment of cholera.

The remedial measures suggested for the treatment of this disease are numerous, and when a large number of drugs are recommended for the treatment of any disease, it is proof positive that its successful management is still a question.

In a review of the literature on the subject of the treatment of cholera there will be found many conflicting statements which tend to embarrass the practitioner unfamiliar with the disease. Although medical art seems greatly restricted in cholera, yet much may be accomplished by the timely and judicious employment of suitable remedies.

A disease so short in duration, and so rapidly fatal, would seem to call for active and very heroic treatment, whereas the least perturbing measures are usually indicated. Much harm may result from over-medication, and also from the use of remedies indicated in one stage continued into that of the next.

The treatment most suitable in the first stage of cholera, that of premonitory diarrhœa, ofttimes becomes positively harmful in the second or the so-called "blue stage" of the disease.

The first essential in the management of a case of cholera is rest—absolute rest. This is imperative. During the prevalence of cholera, even a slight diarrhœa should receive prompt attention. Rest in the recumbent posture must be enjoined, and the patient should not be permitted to get out of bed to go to stool, and should be urged to resist as much as possible the inclination to evacuate the bowels.

In the premonitory diarrhœa of true cholera, remedial agents are very effectual and many lives have been saved by their timely use.

Before the stage of collapse the indication is to control the intestinal effusion. A majority of observers are agreed that opium is the most potent remedy at our command. It may be combined with other remedies, such as camphor and calomel, but opium is the sheet anchor after all.

It may be given by the mouth in the form of morphia or laudanum, or morphia hypodermatically. In the early stage when the vomiting and diarrhœa are not excessive, the local sedative action of morphia, given dry on the tongue, is desirable, but when all medicines are speedily rejected, it must be used hypodermatically. The addition of atropia is valuable. In this stage every moment is precious and the opiate must be given in full doses and repeated until the desired effect is obtained. The combination of morphia, grain one-fourth, and calomel grain one-half, administered *immediately* after vomiting will often give great relief. The powder must be given *immediately* after the act of vomiting and before the muscular coat of the stomach again becomes stimulated by a fresh effusion of serum.

Prof. N. S. Davis M. D., of Chicago, speaks in the highest terms of the following prescription in the early stages of cholera:

℞. Acidi sulph. aromatic.	ʒiv.
Magnes. sulph.	ʒiv.
Tinct. opii.	ʒiv.
Elixir. simplicis	℥i.
Aquæ	℥ii.

Sig.—ʒi in a little water every 3, 4 or 6 hours according to the frequency of the evacuations.

During the first stage the patient should take very little liquid although the thirst may be intense. To allay the thirst ice may be given freely, and for this purpose it is invaluable. If the diarrhœa persists, acetate of lead may be added to the opiate in from two to four grain doses, or the lead may be given per rectum—ten grains of acetate of lead with one-half to a teaspoonful of laudanum, in two to four ounces of water.

If there is any suspicion of malaria, quinine and morphia should be combined and in event of their rejection the quinine should be given hypodermatically and in full doses. All drugs administered by the mouth should be thoroughly triturated.

The painful cramps of cholera are best relieved by seizing the muscles and holding them a moment until they relax. Friction, warmth etc., are nearly useless for the relief of this painful condition.

Mustard over the abdomen and along the spine; also dry-cups, have been strongly recommended. If the case does not pass on to the second stage, attention to diet, rest and general tonic treatment will complete the cure.

If the stage of collapse supervenes, the remedies indicated in the first stage are as a rule contra-indicated in this. Opium which is so valuable at the outset in allaying irritation, arresting exudation from the intestinal surfaces, and controlling the excessive waste, must now be used with caution, for its effect upon the respiration and circulation is akin to that produced by cholera.

During the stage of collapse the gastro-intestinal mucous membrane is almost useless as an avenue for the entrance of medicine into the system. The function of the upper intestinal tract becomes reversed. Instead of being an absorbing, it becomes, in cholera, an excreting surface. In consequence of this condition, other routes must be employed. The respiratory and subcutaneous are practically the only avenues available in the second stage. I desire to direct attention to the possible value of inhalation of oxygen in cholera. The condition of the blood and the profound depression of the respiratory and circulating centres would apparently indicate this remedy. It seems rational in theory, whatever may be its usefulness in practice. It may have been used heretofore, but I have seen no account of it in the literature of this disease.

Camphor is an excellent stimulant to the nervous system. This agent can be used by the hypodermic method in form of camphorated oil in the proportion of one to five. Other arterial stimulants may be utilized—such as ether, alcohol, etc., but the weight of authority is against the use of alcohol, and some observers of large experience condemn its use altogether. In actual collapse the chances of recovery are very small. Continued rest, the careful administration of coffee, or perhaps better, small and repeated doses of caffeine, with well-salted broths may increase the possible chances of recovery.

Intra-venous injections of artificial serum have been resorted to with apparent success. The operation is a delicate one and requires much time and skill for its safe and effectual accomplishment. On this account the method will not be largely employed by the general practitioner. The question naturally arises, if the liquor sanguinis cannot be retained within the vessel walls, will a liquid artificially introduced be of service?

The object of treatment in the second stage of cholera is, to aid nature in her efforts to restore the circulation, and this is best accomplished by the use of external warmth, diffusible and other stimulants, and suitable alimentation. If the patient lives through the stage of collapse, due attention must be given to the kidneys, for uræmia is one of the dangers of cholera.

The value of remedies is confined almost wholly to the first stage of the disease. This fact should be made known to the public, that the premonitory symptoms may receive prompt and efficient treatment.

A TYPHOID CASE OF CHOLERA.

BY S. E. FULLER, M.D.

In the month of August, 1866, it was my fortune to be called to attend the first case of cholera which occurred in the city of Chicago; outside of Cook County Hospital. The patient, a young lady of American parentage, belonging to the richer class of society, sixteen years of age, had spent the evening before her illness with a party of friends and had eaten freely of peaches, the first of the season. Retiring at the usual hour she was wakened at about four A. M. with pain soon followed by vomiting and diarrhœa. The excreta at first consisted of the undigested contents of her stomach and bowels, but at the time of my arrival, nine o'clock, A. M. the characteristic lime water discharges were being voided. She was in full possession of her mental faculties, in no pain, clean tongue and cool to the touch. Voice just beginning to be husky. Cyanosis of face and hands commencing. In spite of treatment she grew rapidly worse; tongue became cold to the touch. Cramps in her limbs giving her great pain so as to cause her to cry out; increasing cyanosis. Cold perspiration. Sodden hands and fingers (washwomen's) until by two P. M. she was in complete collapse and died between four and five o'clock P. M., retaining her senses completely until the last. Some two hours before her death the discharges ceased. This case died in twenty-four hours from her first complaint of illness.

The symptoms peculiar to this disease, as noted at the time, were rice water discharges vomited in an explosive manner and voided in large quantities. Slight or no complaint of pain until cramps in limbs came on. Cool, and later cold tongue; breath cool; hoarse voice. Cyanosis of face and hands, and these symptoms soon passing into complete collapse.

PATHOLOGICAL FINDINGS IN CHOLERA.

BY JOSHUA M. VAN COTT, Jr., M.D.,

Professor of Histology and Pathological Anatomy, L. I. C. Hospital.

This brief *résumé* of the pathology of Asiatic cholera is based upon the theory now accepted by the balance of the scientific medical men of the world, that Koch's comma bacillus is the etiological factor of the disease.

R. Pfeiffer has shown, that the specific poison of cholera is a ptomaine which is probably incapable of complete isolation from the germ, without losing much of its toxic force. He believes that either the ptomaine is in intimate atomic association with the actual protoplasmic atoms of the germ, or that the protoplasm of the germ itself is a rank intoxicant. In any event, dead bacilli in sufficient quantities produce the characteristic semiology of cholera.

Subcutaneous injections of the cholera virus are far less toxic in animals than intraperitoneal injections. Both are followed by marked fall of temperature, great prostration, muscular spasm, cramps.

Koch showed in 1884 that the intestine and stools were loaded down with his bacillus.

Nicati and Ritsch found the germ in the follicles of Lieberkühn, and positively assert that it obtains in the intestinal wall, (supposably the mucosa and sub-mucosa). They also succeeded in inducing cholera at once in animals, by injecting pure cultures of the comma bacillus into the intestine, after ligature of the common bile duct.

No cholera germs have been determined in the blood of human cholera patients (Eisenberg, 1888).

These data simplify the pathology of cholera. Local intestinal irritation, with doubtless general intoxication, through absorption of a ptomaine into both blood and lymph, are productive of profound constitutional and local symptoms, thermal depression (partly nervous, partly cardiac) nervous phenomena, profuse diarrhœa. In general, the serous surfaces are dull, and often covered with a gluey deposit. The blood is anhydræmic, dark colored, thick, and coagulates only partially.

Rigor mortis occurs early and lasts unusually long. The arteries are empty, veins generally filled, heart full or empty. Great general emaciation. Peyer's patches are reddened, slightly swollen, sometimes necrotic. Complete epithelial desquamation from the intestine occurs, sometimes intestinal hæmorrhage.

Kidneys, cortex swollen and pale; medulla congested on venous side. Anuria probably due to loss of water. Spleen and liver said not to be markedly affected. The brain and cord are it is claimed much firmer than normal.

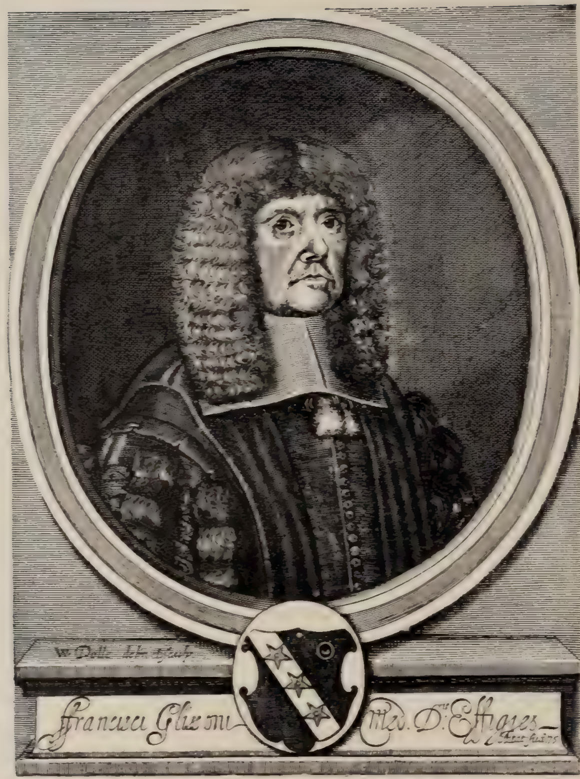
These are the findings in death during the algid stage.

The reactionary stage presents lesions of inflammatory and hemorrhagic nature. Hemorrhages, usually petechial, may be exceedingly numerous, or profuse hemorrhage may obtain. Meningitis and peritonitis may supervene.

The exact reason for development of the hemorrhagic and inflammatory tendencies is not stated; probably the toxic action of the poison on the vessels predisposes to their rupture, especially the smaller ones. Analysis of stools reveals large quantities of blood serum, myriads of epithelial cells and leucocytes, and abundant supply of the specific organism. These ingredients explain the color and other gross appearances of the dejecta.

To sum up, rapid emaciation from rapid loss of water, cramps, probably also for the same reason.

Hyperemesis and catharsis due to local irritation. Cyanosis due to nervous and cardiac depression. Hemorrhage and inflammation in reactionary stage not definitely explained.


ffrancisci Glissonii Med. Dr. Effigies

FRANCIS GLISSON, M.D.

This "bilious" countenance is that of the celebrated author of "Anatomia Hepatis," a work spoken of by Haller, as "Egregius liber, ut solent hujus viri esse."

Dr. Glisson, was born in Dorsetshire, England, in 1597; educated at Cambridge and Oxford, taking his medical degree from the former university, in 1634. In 1636, he was appointed Regius professor of physic at Cambridge, which chair he continued to fill until his death; a period of forty-one years.

He became a Fellow of the Royal College of Physicians, in 1635, and in 1639 was chosen lecturer on anatomy by the Colleges, and acquired much reputation by his lectures. He resided in Cambridge and afterwards in Colchester, and in both places practiced his profession with great reputation; but about 1650, he removed to London, and thenceforward took an active part in the affairs of the Royal College of Physicians, and successfully enjoyed most of the honors which the College could bestow: being Gulstonian lecturer, in 1640; an Elect, in 1655; a Censor, in 1656; President, in 1667, 1668, 1669; Consiliarius, in 1666 and afterwards from 1670, to his death which occurred in 1677, at the age of eighty-one.

Dr. Glisson was one of the first of that group of English anatomists who incited by the example of Harvey, persued their inquiries into the human structure, as it were in concert, and with an ardor and success that has never been surpassed. Of these none exceeded the subject of our sketch in judgment and accuracy. His great work on the anatomy of the liver, was first published in 1654. In it we find the first accurate description of the sheath of the portal vessels, which is the monument that perpetuates his name to anatomists as the Capsule of Glisson. The writer's copy of this work is a beautiful 14mo fol. of nearly 600 pages, printed in Amsterdam, in 1659. The frontispiece represents the anatomist demonstrating a human cadaver stretched upon the table.

His first work was "De Rachitide, seu Morbo Puereli," a disease which had been first discovered in Dorsetshire about fifteen years before. It was published in 1650. His next work invaded the domain of physiology, and was entitled: "De Natura Substantiæ Energetica, seu de Vita Naturæ, etc," London 1672. It is a profound and laborious performance and had the misfortune to appear a century before its time. He first used the term "irritability" to describe that property of muscles in virtue of which they contract on the application of a stimulus. The opinions of Glisson failed to attract the attention of his contemporaries and immediate successors, and it remained for Haller, in 1747, to receive the credit of conceiving the new doctrine.

His last work "De Ventriculo et Intestinis," appeared in 1677, the year of his death.

He died much lamented as a person to whose deep learning the world owed a particular respect and veneration. Boerhaave styles him, "Omnium anatomicorum exactissimus."

J. H. H.

THE

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

APPENDICITIS

A Series of papers read before the Kings County Medical Society, May 17, 1892.

I.—SYMPTOMS AND DIAGNOSIS.

BY W. J. CRUIKSHANK, M.D.

The symptoms attending acute inflammation of the vermiform appendix vary considerably according to the grade, extent and character of the inflammatory process. Some cases are ushered in with very mild invasive phenomena and *apparently* terminate in complete recovery, the illness lasting from three or four days to about a week. These mild cases are, however, prone to recur and are very apt to pass unrecognized until finally a very severe or fatal attack appears before the diagnosis is made or the true condition even suspected. This type of the disease has been called relapsing appendicitis, and, I believe is much more common than one can realize without special investigation. When we remember the experience of Treves who discovered past or present evidences of more or less severe inflammatory trouble about the appendix in about 33 °/₀ of one hundred autopsies made by him, we must be convinced of the great frequency of the occurrence of this disease. Mild cases and some severe ones *apparently* recover in a short time, but unless the inflammation results in a more or less complete obliteration of the calibre of the appendix which is undoubtedly quite frequently the case, a recurrence or relapse is almost sure sooner or later to follow. I cannot remember to have heard any member of the profession make a statement which could, by any manner of means be construed to mean that cases of appendicitis do not *apparently* terminate in resolution, and, I cannot speak too emphatically against a tendency which I have observed in some to throw about themselves an atmosphere of conservatism, under which statements are made which are not only not the result of investigation but are in a great measure untrue.

It is not an uncommon thing nowadays to hear it said of this or that surgeon that he advocates the idea that all cases are severe and that all cases require the performance of laparotomy. Nobody that I know of has ever assumed any such position, and I beg to be allowed in the interests of suffering humanity and the younger members of the profession to protest against such misleading statements being made. We are all very well aware that there are many cases of appendicitis which are mild in character and which terminate, so far as can be discovered by the external evidences, in complete resolution. It should be borne in mind, however, that the severest and most destructive forms of inflammation are sometimes associated with a comparatively mild clinical history. The means for diagnosis which seldom fail us in dealing with the many acute diseases with which we come in contact will often fail us in dealing with appendicitis. The pulse and temperature upon which we are wont to rely implicitly in other conditions will sometimes *mislead* us here. For example, it is not an uncommon thing to see a patient with a pulse and temperature almost normal and the opening of the abdominal cavity revealing a completely gangrenous appendix. Again, quite early in the attack, owing to a probable coagulation in the vessels surrounding the inflammation and a temporary stay in absorption, a complete cessation of the symptoms occur, and both physician and patient are apt to feel safe in the thought that the inflammatory process is terminating in rapid resolution, when in reality it is gathering its forces together for a much more severe and life endangering outbreak. Hence the great importance of the most careful observation in dealing with this disease. It is not so difficult to recognize that appendicitis exists in a given case as it is difficult to determine the degree of inflammation, and, while the conditions to which I have referred are not by any means of infrequent occurrence they are, fortunately, the exception, and our present duty must of necessity be with the rule. There are symptoms in greater or less degree common to *all* cases, and while it is hardly possible within the limits assigned to present them with elaboration we can, I believe, deal with the essential elements, and we must first thoroughly familiarize ourselves with these if we would be in a position to recognize the exceptions.

For the convenience of the study of the subject I have thought it best to group all the symptoms under two heads, namely, subjective and objective symptoms, the latter including the physical signs.

The subjective symptoms are few in number, the most prominent being pain. The attack is usually sudden, the patient complaining of more or less severe abdominal pain of a colicky character which is *sometimes* preceded by a chill or chilly sensations.

When the disease is ushered in by a *distinct* chill I would be inclined to suspect the case to be of the *relapsing* type and would make careful inquiry for the history of previous attacks. My own experience would lead me to the conclusion that a distinct chill is rather the exception than the rule, and that it is always very suggestive of previous inflammation which has resulted in suppuration and possibly the encysting of a small quantity of pus. In a communication from Dr. McBurney on this particular point he informs me that he would roughly estimate the occurrence of a chill as an ushering-in symptom in the cases which he has seen, as once in about five or six. The pain is usually either directly preceded by or accompanied with nausea and vomiting. Not infrequently a history of previous attacks of pain of like character can be obtained, the patient complaining more or less of a feeling of discomfort in the right iliac region *between the attacks.* The pain varies from that of an indescribable sense of weight and fulness in the epigastrium to the most severe colic. It is usually at first diffused over the abdomen radiating from the umbilical region and finally centres in the right iliac fossa. I regard pain as being the most constant subjective symptom, but it should be borne in mind that the patient does not, by any means, *always* locate the pain in the iliac region.

I have seen severe cases of the disease in which all the uncomfortableness was felt in the epigastrium. Sometimes the patient complains mostly of a feeling of weight and a dragging sensation in the right hip. Constipation is usually present. There is loss of appetite, more or less restlessness, and the patient complains of feeling generally unwell. Not infrequently, however, the subjective phenomena attending this class of disease are comparatively mild from the beginning, or after twenty-four or forty-eight hours of severe pain accompanied with nausea and vomiting the patient will cease to complain, and will regard his case as being one of very slight illness, will request to get out of bed, and will be unable to understand the necessity for further attendance, so little ill will he feel. In this connection the fact must not be lost sight of that previous to the development of fatal septic complications the patient frequently complains the least, and the subjective symptoms may be *very misleading*. Hence the importance of keeping the patient under close observation until convalescence is fully established. In the perforating or traumatic form of the disease the subjective symptoms resolve themselves into severe pain in the right iliac region, accompanied with the evidences of shock and collapse, with which we are all familiar.

The objective symptoms are usually well marked. The patient generally assumes a position peculiar to the disease and lies with the right thigh drawn toward the abdomen or, in severe cases, sits in a bent or doubled up position with both thighs flexed. The countenance expresses suffering of greater or less degree. In the traumatic form the countenance is expressive of great anxiety and the objective symptoms are, like the subjective, those of shock. Indeed, the symptoms of shock in connection with the McBurney point tenderness may be regarded as almost pathognomonic of perforating appendicitis. The pulse in the beginning of the attack is usually accelerated, ranging from 90 to 120, and there is a rise in temperature of from one to three or sometimes four degrees. But, as I have previously stated, we must never rely wholly on the pulse and temperature for fear of being misled by them. In by far the most dangerous form of the disease, the perforating, we very frequently have no rise in temperature the perforation being attended with no symptoms but severe pain and vomiting, some shock, followed by twenty-four or forty-eight hours of comparative ease and comfort, during which time there is ample opportunity for the development of a spreading peritonitis or a life-destroying septic infection. Then, again, we have those cases in which the temperature has risen gradually during the first two or three days, finally reaching 102° or 103°, and then subsiding until it reaches almost the normal point and with it the pain and local symptoms, leaving hardly a trace of the former evidences of disease. But in their place comes the peculiar, dark grayish look so characteristic of sepsis and in which the surgeon's knife reveals an appendix lying in the peritoneal cavity, gangrenous in its entirety. In no disease is the general aspect of the patient more important in considering the objective symptoms than in this. By a more or less sudden change in his appearance we can sometimes be sure that surgical interference is necessary in order to save life.

Abdominal tenderness is well marked early in the attack. At first it may be somewhat diffused, but it is always more prominent in the right iliac fossa and is usually accompanied with more or less rigidity of the right abdominal muscles. The McBurney point, of which so much has already been said, if looked for in the early stages will rarely if ever be found absent. It is the maximum point of tenderness and is situated exactly two inches from the anterior superior spinous process of the ilium on a line toward the umbilicus. In an endeavor to demonstrate the accuracy of this very valuable diagnostic feature one finger tip alone should be used, and the pressure should be made deep down toward the abdominal cavity. This position corresponds to the base of the appendix. Observers are pretty generally agreed that while the point of greatest tenderness is sometimes a little removed from the spot described the variations are so slight and rare as to be of no practical importance. Those who have expected to find it very late in the disease when there is present a large and deep-seated abscess have, of course, met with disappointment.

If localized peritonitis be present there will be more or less tympanites and painful abdominal distention; but *early* and *painless* distention of the abdomen is to be looked upon with great dread, and is always strongly suggestive of septic paresis of the intestines from which when well developed we have yet to hear of a recovery. Hence the importance of recognizing the true condition of affairs before this symptom manifests itself.

The presence of a tumor in primary appendicitis cannot, as a rule, be made out. The pathological conditions are not such as will give rise to the early formation of any such means of diagnosis. If the abdominal wall is thin, and there have been repeated attacks, it is at times possible to make out an indurated point corresponding to the position of the appendix. But the tenderness is usually so great and the muscular rigidity so well marked that even under the influence of an anæsthetic it is quite difficult to determine the existence of a tumor through the anterior abdominal wall. Late in the course of an inflammatory process which has resulted in suppuration and the formation of an abscess, a tumor of greater or less prominence may be expected and the usual physical signs will in the majority of cases be present. But to expect to find a reasonably well-defined tumor during the early manifestations of the disease is not to appreciate the existing pathological conditions and affords an opportunity for errors in diagnosis.

Examination per rectum, unless very late in the disease, cannot possibly give any clue to the existing condition, and in my opinion is a worthless procedure.

May I be permitted now to recapitulate some of the more prominent symptoms under special headings.

The prominent symptoms attending the catarrhal form are: 1st. Sudden abdominal pain, more or less severe, of a colicky character, radiating from the umbilicus and finally centering in the right iliac fossa. 2d. Nausea or vomiting or both. 3d. Febrile movement of greater or less degree. 4th. Well marked right iliac tenderness with its maximum of intensity at a point exactly two inches from the anterior superior spinous process of the ilium on a direct line toward the umbilicus. 5th. More or less rigidity of the right abdominal muscles.

The prominent symptoms attending the perforating form are: 1st. The characteristic position assumed by the patient peculiar to the disease, namely, the right thigh flexed on the abdomen. 2d. Nausea and vomiting. 3d. The evidence of shock, anxious expression of countenance, surface and extremities cold, temperature either normal or subnormal, respiration and pulse increased, right iliac pain, and very marked tenderness at the McBurney point.

The prominent symptoms of the relapsing form are: 1st. Attack, usually ushered in by a chill. 2d. History of previous attacks of pain of like character, with pain and uncomfortableness in the right iliac region in the intervals, and more or less debility in consequence. 3d. Constipation more or less obstinate. 4th. Marked tenderness at the McBurney point and possibly induration corresponding to the position of the appendix.

The diagnosis of appendicitis is sometimes difficult, but I think we may venture the opinion that the difficulty is not very great in uncomplicated cases. There are many pathological conditions occurring in this region with which it may be confounded, but their characteristic features usually stand out in such bold relief as to make it quite possible to recognize the difference.

Nephritic colic, aneurism, hydronephrosis, pyonephrosis, fæcal impaction, the various pathological new formations which may result in obstruction, ovaritis, salpingitis, cystitis, abscesses within the solid viscera, etc., etc., may present themselves to our mind's eye in considering the question of diagnosis, but these several conditions are usually attended with their respective particular phenomena which will in the great majority of instances admit of their exclusion. The errors in diagnosis which have been made in dealing with this condition can be traced in the vast majority of cases to the terms which I regret to say are still more or less in use, namely, perityphlitis, paratyphlitis and typhlitis. If we can fix the one fact firmly in our minds that the conditions which these terms were intended to express rarely if ever existed, and that they do not exist primarily at all, we are in a position to exclude them, and we are then brought down to an inflammation of the appendix pure and simple. Primary inflammations of the cæcum and its surrounding tissues are of such rare occurrence as to be excluded and the conditions which resemble them are without doubt cases of appendicitis. This fact has been settled so definitely as to admit of no further discussion, and if we can start in our attempted diagnosis with the exclusion of these mythological terms it will help us very much. Then comes our appendicitis with its varied but characteristic features, its sudden pain, accompanied with nausea and vomiting, its acceleration of the pulse and rise in temperature, its peculiar expressions of countenance, its retraction of the right thigh and abdominal tenderness, and lastly its pathognomonic feature, the McBurney point. When its image is once fairly stamped upon our memories it will leave an impression which cannot well be forgotten.

There is one point which it seems to me should never be lost sight of, and which if remembered will at least be the means of putting us on our guard against this ever to be dreaded malady. I refer to its undoubted great frequency. I regard idiopathic colic as of such rare occurrence that I almost invariably seek its cause in the vermiform appendix. That cases of appendicitis are, time and time again, diagnosed as gastro-enteritis, entero-colitis, idiopathic-peritonitis, etc., there can be no question. If we will remember the facts that *idiopathic* peritonitis does not exist at all, that appendicitis is very frequent and that by far the greater number of cases of acute peritonitis occurring in the male have their origin in the appendix, it will help us very much in our diagnosis.

Finally, in obscure cases we may resort to an unfailing means of diagnosis, which in these days of antiseptic surgery may be regarded as a perfectly justifiable procedure when considered necessary, namely, the performance of an explorative laparotomy for ocular inspection of the parts.

II.—MEDICAL TREATMENT.

BY GLENTWORTH REEVE BUTLER, A.M., M.D.,

Physician to the Methodist Episcopal Hospital.

The medical treatment of appendicitis is growing less and less active and important as our knowledge of its pathological character increases. An inflammatory, necrotic and septic disease of the appendix and its surroundings, both peritoneal and cellular, does not lend itself kindly to strictly medical treatment. When an inflamed, gangrenous or perforated viscus, or a collection of pus can be reached by reasonably safe surgical means, it appears to be a waste of time and human life to hesitate and temporize until the favorable moment has passed. From this point of view the consideration of the medical treatment of appendicitis will be brief.

There can be no prophylactic treatment prior to the initial attack, at least in adults, as there are no premonitory symptoms. In children there may be prodromata, colicky pain in right iliac region, slight lameness in walking, and, perhaps, vomiting and constipation, but these symptoms are very liable to be misunderstood. The consequence is that the diagnosis is rarely if ever made until the occurrence of the acute attack.

When the diagnosis is made to a reasonable certainty, not always an easy thing, absolute rest and fluid diet should be insisted upon. There has been and is much controversy as to the use of laxatives. In the early stages there can be no objection to gently moving the bowels by fractional doses of the mild chloride of mercury frequently repeated. This is preferable, but small doses of salines may be substituted. High enemata of plain warm water may also be used in the early stages.

In the later stages, after pus has formed or perforation may be surmised to have occurred, or to be imminent, both laxatives and enemata are contra-indicated. If at the beginning coprostasis can be determined by palpation, the use of laxatives and especially of high enemata is strongly indicated. This colonic impaction constitutes the stercoral typhlitis of the older nomenclature.

The local inflammatory symptoms demand attention. I am sure that I have seen the milder attacks aborted by the early, thorough and persistent use of moist heat over the right iliac region. It may be in the form of poultices or hot fomentations, with or without turpentine or mustard, but kept hot and changed frequently. Opium may and should be used judiciously. By the phrase is meant its use in small doses to relieve pain and to quiet the patient, each to a moderate extent. Its administration to decided narcotism should be strictly avoided as tending to mask the important symptoms, and to give a delusive impression of lessened activity in the advancing septic trouble.

Vomiting and nausea are to be relieved by the usual remedies, more especially cocaine. It is not proper to use antipyretics. They interfere with the natural history of the temperature which is a factor, sometimes important, in judging the necessity for operation.

The most important element of medical treatment is the clear recognition of the fact that appendicitis is essentially a surgical disease. The main thought in the physician's mind should be: "Is it not now time for operation?" It is apparently well established that the danger time in the majority of the severe cases lies in the second or third day of the disease. It is during these days that the scale is turned against the patient by delay in operating. In the milder cases the question of operation may not arise even in the mind of the most radical.

In the severer cases it is my firm conviction that the surgeon should be associated with the physician in the daily observation of the patient. The surgeon should be one trained in modern methods, and with experience as operator or assistant in abdominal surgery. No false pride should deter the physician from asking advice of his surgical brother. It is probable that from fifty to seventy-five per cent. of all cases of appendicitis are operable cases.

The treatment of convalescence and of recurring appendicitis claims brief mention. Easily digested food, devoid of irritating constituents is of importance. Violent exercise, *e.g.*, swimming, running, rowing, should be avoided. A regular daily evacuation of the bowels should be secured without fail by medicinal or dietetic means. By the adoption of these precautions the danger of recurring attacks will be decidedly minimized.

III—INDICATIONS FOR OPERATION.

BY J. BION BOGART, M.D.,

Assistant Surgeon to the Methodist Episcopal Hospital.

That many cases of appendicitis of a mild type pass unrecognized and recover without treatment of any kind is abundantly proved in the dead-house, where careful examination by different observers has revealed more or less evidence of disease of the appendix in one-third of all autopsies.

So, also, many clearly defined cases recover in a few days under medical treatment without at any time giving rise to serious apprehension as to the ultimate result.

Still others, of sufficient severity from the beginning to arouse the anxiety of the patient and his friends, as well as the medical attendant, characterized by the rapid development of a tumor of considerable size, terminate in recovery without operation, the tumor undergoing spontaneous resolution. The tumor failing to disappear, many cases have been conducted to a successful issue by its incision and the evacuation of a varying amount of pus, after the method of Willard Parker, while in a few cases, spontaneous evacuation of the abscess, after prolonged suppuration, has resulted in cure.

Let these facts be emphasized, and let it be understood that they are as thoroughly appreciated by surgeons as by physicians. Then shall we be able to consider without prejudice the indications for surgical treatment.

With the first two of these classes, we, as surgeons, have nothing to do. We have no desire to treat surgically any case that offers a fair prospect of recovery under medical treatment. We recognize too well the difficulties as well as the dangers of the operative treatment even in these days of abdominal surgery.

Our interest lies in those rapidly fatal cases in which perforation in the absence of protective adhesions exposes the entire abdominal contents to a virulent spreading infection ; and in those, more fortunate, in which, owing to limiting adhesions, an abscess, having for its walls the adjacent viscera and the abdominal parietes, develops with greater or less rapidity.

Having determined the class of cases in which operation is clearly indicated it would be interesting to know how frequently they occur.

In a discussion before the Association of American Physicians in May, 1890, Reginald Fitz, professor of pathology in Harvard University, reported seventy-two cases seen by himself in the preceding four years, mostly in consultation. So far as I am aware this is the largest recorded individual experience. He says : "Of these cases seventy-four per cent. recovered, and twenty-six per cent. died. About one-half of them were treated medically, the other half receiving surgical treatment. Among those treated surgically forty per cent. died, while of those under medical treatment eleven per cent. died, ... and in fourteen per cent. there was the spontaneous evacuation of pus; thus in one-fourth of these (medical) cases the treatment should have been surgical.

"Since these medical cases were about one-half of the whole number seen, it follows that the treatment should have been surgical in at least five-eighths of the cases.

"The percentage of cases ending in resolution was thirty-six. Medical treatment should, therefore, be limited to a little more than a third of the cases."

As most of his cases were seen in consultation, it is fair to assume that the average severity was greater than if only those occurring in his own patients had been noted. The proportion requiring surgical treatment would, therefore, have been somewhat smaller.

Having from these statistics formed some idea as to the frequency with which operation may be required, let us now endeavor to determine the period at which it should be resorted to.

In 176 fatal cases of appendicitis reported by Fitz in 1886, death occurred in four per cent. on the second day, eleven per cent. on the third, seven per cent. on the fourth, eleven per cent. on the fifth, nine per cent. on the sixth, twelve per cent. on the seventh, and twelve per cent. on the eighth. Thus, "sixty-eight per cent., more than two-thirds, die during the first eight days, and two-thirds of *these* die between the fourth and eighth days inclusive."

As this report was presented nearly two years before Sands reported his first successful case of early laparotomy for perforative appendicitis, it is fair to assume that no operation was done upon those dying within the first eight days.

These figures are startling, alike to physician and surgeon. They teach us that not only is appendicitis a fatal disease in certain cases, but, also, that death generally comes early.

If, therefore, we desire to forestall a fatal result in what are otherwise necessarily fatal cases, we must operate early, generally before the fourth day. But not only is it necessary for us to operate before the day on which death would probably have occurred without operation, we must anticipate those conditions which determine thus early, the fatal result, or, at least, recognize their earliest manifestations, and be prepared to interfere before they have passed that limit beyond which operation only hastens the fatal issue.

In an article upon early laparotomy in appendicitis, read before the Medical Society of the State of New York, in February, 1891, McBurney says: "It is *not* best to wait for strong evidence of perforation, abscess, or general peritonitis. It is *not* satisfactory to wait until the pulse becomes rapid and weak, and the respiration anxious. What are the signs of 'impending perforation?' No one can name them. When we discover 'spreading' peritonitis, peritonitis has already spread. If it has passed beyond the wall of an abscess, then the abscess has already ruptured. If we wait for marked distention of the abdomen we shall often find at operation a septic paresis of the gut, from which condition I have yet to see a single patient recover. Such indications as these are the very conditions we should endeavor to *anticipate* if we wish to save almost all of our cases."

What, then, are the indications for operation, and when should operation be undertaken?

In answering this question I cannot do better than to quote the opinions of those who have had the largest experience.

McBurney, whose brilliant results of fifty early operations with one death entitles him to a first hearing, says: "By the end of thirty-six hours, sometimes much earlier, the question of operation should be deliberately discussed by the physician in attendance and the surgeon who would be called on to operate, if operation were deemed necessary. . . . . Advancing disease with clear signs at this period should be operated upon."

Fitz says: "It is evidently desirable to make the rules for the surgical treatment of appendicitis as simple as possible, and I would advise it for *urgent symptoms* (rising pulse and temperature, increasing distention and spreading pain) with or without a tumor, and for a tumor, with or without urgent symptoms."

These are the opinions of the surgeon and physician having the largest reported experience in this disease.

If these indications are acted upon, there is no doubt that a few cases will be submitted to operation which would have recovered without it, but, as we have seen, if we wait longer for clearer indications we shall often be too late to save those for which early operation is the only hope.

Moreover, recurrence takes place in about forty per cent. of all cases recovering either under medical treatment or after late operations, at which time removal of the appendix is generally not possible.

Finally, we feel called upon to offer the resources of our art in those comparatively rare cases of recurrent appendicitis in which the patient is deprived of the enjoyment of life or the ability to earn a living.

IV.—TECHNIQUE OF OPERATIONS.

BY H. BEECKMAN DELATOUR, M.D.,

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As the anatomical conditions present in appendicitis vary, so must we vary the operative procedures for its relief. Time will not permit a discussion of the relative value of the different methods of incision, the median, lateral and the combined, drainage, etc., so in this paper will be given only the methods of operative procedure which seem to be most generally accepted.

In operating for this condition we must be guided by certain general rules, the same as for any laparotomy, and certain special ones for the anatomical conditions present.

The cases of appendicitis, from an operative standpoint, may be divided into four distinct classes :

1st. Cases which have gone on to abscess and have become attached to the anterior abdominal wall.

2d. Those cases in which abscess has formed but which remain remote from the anterior abdominal wall.

3d. Cases of catarrhal, suppurative and gangrenous appendicitis, either with or without perforation, but without abscess.

4th. Cases in which perforation has taken place without the formation of limiting adhesions and with the development of a general septic peritonitis.

Operations during the stage of quiescence may be considered with the third division.

As to the general preparation for operation, of course, thorough asepsis and antisepsis must be established and maintained through the entire operation. Instruments may be conveniently and completely sterilized by boiling in a solution of washing soda, a drachm to the quart. For sponges the regular absorbent gauze is preferable and may be sterilized by either dry or moist heat. The abdomen of the patient should be thoroughly scrubbed with soap and warm water, shaved, washed with bichloride, and finally, to remove the fatty elements, with ether. If time will permit, the abdomen should be covered for several hours with compresses wet with Thiersch's solution, or this might well be done during the early stages, even before operation is indicated. As an additional precaution, in cases where previous preparation has not been possible, a coat of tincture of iodine may be painted along the line of incision.

In the choice of anæsthetics we have to be guided by the patient. It is well to start with chloroform, so as to avoid the initial stage of excitement as far as possible, and then to continue it if the patient bears it well, otherwise ether is to be substituted.

The patient having been anæsthetized is placed on the table, the abdomen bared, and the site of the operation isolated from the surrounding parts by means of towels wet in bichloride, 1-1000. The surgeon, and his assistants, having thoroughly scrubbed the hands and arms with soap and warm water, cleansed the subungual spaces and immersed them for a few minutes in 1-2000 bichloride solution, is ready to proceed with the operation.

In the first variety, where abscess has formed and is attached to the anterior abdominal wall, the incision is made over the most prominent part of the tumor, down to the abscess wall which is incised and the pus evacuated. The cavity is then thoroughly irrigated, and the wall may be curetted with advantage. The cavity is then packed with either zinc oxide gauze or iodoform-gauze. The gauze if packed in loosely gives perfect drainage and also has a direct effect in stimulating granulation. The after-treatment consists in the irrigation and repacking the cavity every two or three days according to the amount of discharge. By some, it is recommended to make a posterior opening in these cases to facilitate the discharge. This does not seem to be necessary.

In the second class of cases the procedure is not so simple. In these we have formed an abscess within the abdomen, which we must attack through the general peritoneal cavity. The abscess is usually situated in the right ilio-lumbar region, behind and to the outer side of the cæcum and ascending colon. The pus is shut off from the general peritoneal cavity by adhesions between the visceral and parietal peritonæum. The abscess may be to the inner side of the cæcum or even in the true pelvis if the appendix happen to project downward.

In this set, if a distinct tumor is to be felt through the abdominal wall, the incision should be made over its most prominent part. If the tumor is not distinct the incision should be made along the outer edge of the rectus abdominis. In should be four or five inches in length and extend down to the peritonæum. The peritonæum may be at once opened to the full extent of the incision or for only a couple of inches and then enlarged as it is found necessary. Two fingers are then introduced and search made for the appendix or for any tumor in the region of it. Most commonly in these cases, the appendix lies behind the cæcum, having been bent upwards upon itself. After the tumor is located the intestines are retracted either by means of large angular retractors or preferably by an assistant, this brings the abscess wall into direct view. Evacuation of the abscess is the next step, and must be accomplished without infecting the general peritonæum. To do this one of two methods may be adopted.

First, the peritoneal cavity may be shut off by carefully placing sponges about the field of operation, then by making a small opening in the abscess wall or by breaking down the adhesions, and these usually give way readily as they are recent, only a small amount of pus is allowed to escape at a time, and by means of sponges this is quickly removed. The second method consists in suturing the peritoneal covering of the cæcum and ascending colon to the edge of the parietal peritonæum along the inner margin of the original incision. This closes the peritoneal cavity and converts the further operation into an extra-peritoneal one. Now the adhesions may be broken down and the pus allowed to escape. After emptying the cavity in either case search is to be made for the appendix, which is usually found to the inner side. As a rule, with the fingers, the adhesions about the organ can be readily broken down and the appendix brought into the incision. In this case a ligature of either silk or catgut is placed as near the attachment of the cæcum as is possible, and then after cutting away the appendix the base is cauterized with either the actual cautery or pure carbolic acid. Where there is difficulty in removing the organ it may be let remain with the expectation that a considerable portion of it will slough away during the after-treatment.

The cavity is now to be packed with either zinc oxide or iodoform-gauze and a portion of the original incision is to be closed by suture, preferably the crossed silkworm-gut sutures.[1] The gauze packing drains by capillary action, and is much to be preferred to either glass or rubber tubes. The after-treatment consists in irrigating and repacking the wound every two to four days. In these cases irrigation at the time of operation is not to be recommended for the pus can be easily removed in the manner described. The sutures between the parietal and visceral peritonæum should be removed about the fourth day.

In the cases where there is either an acute catarrhal or gangrenous condition, and in those cases operated upon between the attacks, the incision along the right rectus abdominis should be made. This incision should be a little beyond the outer edge of the muscle, for if we keep too near the margin of the muscle there is danger of wounding the deep epigastric vessels and particularly the vein. These, if wounded, give considerable trouble on account of their free anastomosis. The incision should be about four inches long with its centre over the site of the appendix. After opening the peritonæum the finger is introduced and search made for the appendix. If it is not readily found the intestines and abdominal walls may be retracted, as described above, and the cæcum sought. The anterior band of the cæcum if traced downward will lead directly to the attachment of the appendix. If there are no adhesions the appendix comes easily into the wound. Then, by means of a Keith's ligature carrier, a double ligature of either silk or catgut is passed about the base of the appendix and tied in two places, so that space enough is left to cut between. This method of double ligature prevents the contents of the appendix from escaping at the time of the division of its walls.

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[1] Annals of Surgery, 1892.

If adhesions are present they can generally be broken down except where there have been several previous attacks of inflammation, when the adhesions may be so strong that it is not safe to tear through them for fear of injuring the intestine or of starting up troublesome hæmorrhage. In these the adhesions had best be ligated before being divided.

Another set of cases, to be considered with this group, begin with a more or less regular history of appendicitis, and after several hours the symptoms become more those of intestinal obstruction. It has been my fortune to see such a case in which an attack of inflammation of the appendix had been followed by adhesion of its free extremity to the mesentery of a portion of the small intestine so as to form a constricting band. This band so constricted the intestine that complete obstruction to the passage of gas and fæces developed. Operation, if done early, is likely to be successful. The incision along the right rectus is the most convenient in these cases. The appendix when found is ligated at the base and then freed down to the tip, where it is attached to the mesentery. Here, also, it is well to tie with a double ligature and cut between. Attempts to tear through the adhesion may tear the mesentery and give rise to considerable hæmorrhage.

In the cases included in this group, the further steps after removal of the appendix vary somewhat with the conditions present. In the acute stages it is safest to close the wound through only a portion of its extent and to pack down to the stump at the point of ligature. In the cases in which the operation is done between the attacks and those in which the appendix has formed a band, it is safe, as a rule, to close the entire wound without drainage, provided strict asepsis has been maintained through the operation.

In all the cases described, the outer dressings should be plentiful and consist of absorbent gauze wet with bichloride solution and such other absorbent material to back this with as may suit the fancy of the surgeon. In order to prevent the development of hernia the patient should be kept in bed for at least four weeks, even when the wound has healed in a shorter time.

In cases of the fourth group, those with septic general peritonitis developed, very little can be expected from operation. These cases, as a rule, have developed septic intoxication, and anæsthetics are not well borne by them. In these the indications seem to be to remove the septic material from the abdomen rather than to remove the appendix. The cleansing of the cavity under the circumstances can only be done by flushing. It has been my desire to make an attempt in these desperate cases to remove the septic material by means of continuous irrigation of the abdomen. The proposition is to make a small opening into the peritoneal cavity in the left hypochondriac region and a larger opening over the appendix. An irrigation point would then be introduced into the smaller opening, and by means of a drain the fluid would escape at the larger opening. A non-poisonous antiseptic solution, such as 1-4000 hydronaphthol, should be used for the irrigation. The incisions should be made under cocaine anæsthesia, for as already stated these cases do not bear general anæsthetics well. As an objection to this plan it might be thought that the adhesions which develop would prevent the flow of the fluid through the cavity. This is not likely to be true, for the adhesions in these cases are not usually many and never very firm. If the fluid did not flow freely the finger might be introduced through the larger opening and break them down. Since formulating this plan of treatment I have had no opportunity of trying it, but believe that occasionally, through its employment, a desperate and otherwise hopeless case might be saved.

DISCUSSION.

Dr. Robert F. Weir, of New York:—Mr. President and Gentlemen: When I received the invitation to appear before you I accepted it with great pleasure, because I appreciate your great interest in the subject of this evening's discussion, as well as I believe you appreciate my own interest in it. I came over here to learn and I have learned. I know what my colleagues in New York will say concerning a given case; one will say operate at once; if I call in another one, he will say let us wait twenty-four hours, and see what comes. After all the determination of what to do turns on the natural history of the so-called catarrhal form of appendicitis. Were every case we had to do with due to perforation or a gangrenous condition, the surgical indications would be as plain as a pike-staff and laparotomies would be common in every case. But it is not so. Physicians have lately confronted the surgeons with a fact that has not grown a bit smaller since it was first put forth, that they have had a great many cases that got well without the aid of the surgeon. Pepper says not one in twenty cases come to operation. The quotation from Fitz while valuable in a surgical way is not so valuable otherwise, because he has seen the cases quoted by him in consultation and where often the question or operation was pending. What we want is a statement from a number of reputable and experienced physicians that they have seen a certain number of cases of appendicitis, and that so many got well with operation and so many without. I cannot find much information of this sort. The closest that comes to it is the brief report of Dr. Kinnicutt before the Academy of Medicine in New York, where he presented as the result of his experience that he had had thirteen cases among his clientèle, of which seven came to operation.

I remember three years ago when I undertook an investigation of 100 cases of autopsies of patients dead from appendicitis, that the fatal result in eighty-eight of them was due to a perforation or gangrene of the appendix, and in only three of them it was due to a catarrhal difficulty of the appendix, one with perforation, and the other two without. I felt even then that we must know more about this form of trouble, and in order that I might, if possible, be able to distinguish between the severe form that required early operation, and this catarrhal form which the physicians were encountering so frequently, I hunted long and worked in a literary research very hard, but got very scanty information. About that time the operation for the relapsing form of appendicitis came into vogue and quite a number of cases accumulated, and a year ago last winter I presented to the State Medical Society in Albany, some twenty-six operations done for this form of appendicitis. Eighteen of them showed catarrhal difficulties. I thought as many of these cases had repeated attacks that perhaps the very repetition of the attacks might give me some help. I then collected some thirty cases operated upon in the New York Hospital with abscesses occurring at different stages, and where the history of frequent attacks had been put down. In twenty-three of them there were only three attacks, and then came the explosion which demanded the operation. In only one of them did the explosion take place after the fifth attack, hence I began to feel that I had something which helped me to distinguish these catarrhal forms. It seemed to me then that if a patient had more than four or five attacks, it might be assumed that his lesions were those of the catarrhal form, and that the danger to life might be considered quite small. Moreover, I did not think it was good argument in urging operation in the quiescent stage to put forth that the patient was in danger of his life, because as then considered, the catarrhal form was not fully proven to have often set up serious inflammation. Mackenzie, moreover, has stated that these repeated attacks, by the exudations which they occasion in their early history would protect the patient from a spreading peritonitis, and if anything serious took place the patient would only have an abscess.

In operating in New Jersey after quite a large number of appendix extirpations, I came across the first abscess, which was due to catarrhal distention, that is to say without concretion or foreign body, to such an extent as to give rise to a minute perforation. Stimson also reported two similar cases following catarrhal conditions and ulceration.

Within the last two weeks a patient presented himself to me having had previously seven other attacks in the past three years with acute symptoms sufficiently severe for me to undertake a laparotomy with removal of the appendix. I found this enlarged and thickened without any perforation whatever, with a moderate amount of pus around and outside of it, and a good deal of fibrinous exudation. On Sunday last another man was admitted to my ward in the New York Hospital with symptoms demanding operation at which I found an appendix five-and-a-half inches long, the walls enormously thickened and infiltrated without any perforation, originating from changes in the mucosa within.

You see where all this leads us. It means that we cannot tell the difference by the symptoms, between the catarrhal and the severer forms in the initiatory stage, and we are compelled to admit that the catarrhal form may imperil life. If this is the case you can see how I have been driven from a comparatively conservative stand (though I think I was among the first to advocate early operation in appendical difficulties), and been drawing my operative interference lines closer and closer to the initial stage of the trouble. I believe now, to put myself perfectly clear before you, that given a case commencing as has been aptly described by the preceding gentlemen, if after the expiration of twenty-four or forty-eight hours there is no coincident diminution of the severity of *all* (and observe the emphasis that I placed on this word) the symptoms, it is more dangerous to allow the disease to go on than it is to operate. This is the consideration which we in New York are now putting forth as containing the gist of the whole subject—which is the more dangerous, the operation, or the disease in this very early stage? Considing the facts that we have been able to accumulate, alluded to by one of the gentlemen, the brilliant results of McBurney with fifty cases, and with but one death in selected cases — cases taken comparatively early because he, like his confrères, has had bad results in those cases beyond the third day, when sepsis or general peritonitis has taken place; I would remark that when general suppurative peritonitis has set in the issue is most disastrous. Individually I have had twelve instances of general suppurative peritonitis in which I have not had a single successful outcome, though one or two such cases have been reported as satisfactorily managed in other hands.

I repeat, considering all these facts, we have been driven to the conclusion that it is better to take the chance of the operation if we do not find all the symptoms diminished. I will amplify that and take this specimen as a text. This patient was seized at night with a terribly severe pain in the right iliac fossa, with several attacks of vomiting. I saw him the next day when the vomiting had ceased. His temperature was 102°, his pulse 84, and his respirations were not above the normal, but he had in addition to this a symptom to which I attach a great deal of importance—the marked rigidity of the abdominal wall on that side. I saw him the next day and his temperature was 103°, pulse 84, abdominal rigidity diminished and tenderness remarkably diminished. I felt unwilling to let that patient go on, his improvement not being equal in all his symptoms, hence I urged an operation, and the result was that I found the lower half of the appendix was gangrenous. It had not burst, and the patient progressed without interruption to recovery. Of the forty appendices which I have removed, thirty-seven have been affected either with gangrene or perforation.

A large number of the gangrenous ones contained a concretion, and the gangrene was limited to the site of the concretion; in other words, I believe the gangrene is largely dependent on the contained concretion, whether local or is common to the portion beyond the concretion; the inflammation in the appendical walls making greater pressure on the concretion within, and the gangrene resulting in that way. Others, as you know, have had an idea that gangrene was due entirely to inflammatory accidents independent of the concretion.

Again, this specimen represents another one of these appendices where operation was done in forty-eight hours with the usual combination of symptoms. In this case the temperature had dropped to normal, and the only abnormal symptom was vomiting, and yet the operation was done, the abscess opened, and the appendix extirpated, and the patient made a rapid recovery.

Since last November I have seen twenty cases of appendical difficulty of which fourteen came to operation. Of these fourteen cases, twelve were acute cases, and all recovered after a laparotomy, ten of these were due to a perforation or a gangrenous appendix, as proved by its removal, and two to a chronic catarrhal inflammation, one with and the other without perforation, also removed. The two other cases wherein death occurred, were seen late in the disease, beyond the tenth day, one of them a sub-diaphragmatic abscess and the other a general suppurative peritonitis due to the disease having progressed for over a week prior to being sent to the hospital. In the latter case there was an exceedingly interesting surgical combination. There were the usual symptoms of great distention of the bowels. On making the incision general suppurative peritonitis was found to be present. Either from the pressure on the abdominal walls, or from the handling of the intestines in the examination I cannot say, but, at any rate, the regurgitation of a large quantity of material from the stomach took place, and the patient was swamped immediately from its inhalation into his lungs. Gregg Smith suggests that in these cases one should not give an anæsthetic, but do the operation under cocaine, laying stress on the fact that handling of the bowels can take place without giving the patient much pain. I should think if the patient's strength permitted, washing out the stomach would be proper, nor should the hips be elevated.

There are one or two points in connection with the treatment which I will only remark upon in a cursory manner. Aside from the time chosen to operate, considerable depends on the method of operation. The details of this have already been very well given by Dr. Delatour, and I will only emphasize one or two points he has made, because by the methods given by him, is that followed by Tounenberg, who has had thirty-two cases of laparotomy for appendicitis without a single death. In my own work I can present as an outcome of improved methods and early operation some twenty-five selected cases with no deaths. Opening the abdomen and crowding away the encroaching intestines by sponges, or preferably by boiled gauze pads, so the operating area is entirely free, make an incision so large that there is a clear inspection to be thoroughly accomplished, and then the careful dissection under the guidance of the eye or with the end of the finger, or what I like very much, with the blunt end of a curved-on-the-flat scissors, are the principles of the operation. When the cæcum is exposed and recognized, it is generally best peeled away on its outer side down to the origin of the appendix, and you will generally break here, in early cases, into a small abscess in so doing though not always. The contents of this are gathered up by sponges, so the whole thing is done as cleanly as possible, the appendix can then be enucleated or lifted up and tied off with catgut and not with silk. Silk very often gives rise to a fistula, and it is only by fishing with a crochet needle or bent probe that you can get it out later. With catgut this is avoided. The ligature of the appendical mesentery is best accomplished, if required, with catgut. After you have removed the appendix and have seared the stump with a Paquelin cautery, or dusted it with iodoform (and here is a point that I lay stress upon), before you have taken away your protecting sponges or pads, pack several layers of iodoform-gauze in two or three separate sheets or compresses, so as to make a pocket, the central portion of it being the stump of the appendix. Then by pulling down to one side your pocket of gauze you can abstract your sponges and pads without dislodging the iodoform-gauze from the bottom of the wound. No drainage-tube is required.

To do the operation well a good-sized incision is requisite, but the great objection to a large incision is that you weaken the abdominal walls and may cause hernia. My own feeling is not to have a small opening. I prefer to have rather a large opening, and to avoid this subsequent production of hernia and at the same time to obtain a three-, four- or five-inch incision in the abdominal wall, at the close of the operation, I am in the habit now of passing in heavy silkworm-gut sutures through the whole thickness of the abdominal wall, some one-half to three-quarters inch apart with their ends loosely tied. At the end of three or four days to a week or ten days the iodoform-gauze is twisted out and then these provisional sutures are taken up either at once, save a small opening, or a few each day until the abdominal wound is entirely closed. In this way you can bring about repair of the abdominal wound rapidly and with a much smaller and stronger cicatrix than by the healing of a wide opening.

Dr. George R. Fowler:—In looking at the subject of appendicitis from the standpoint of the surgical clinician, it will be best for us to roughly map out such a clinical division of the disease as may help us to systematize our knowledge, and to fix in our minds its varieties, for all will agree, who have had much to do with the disease, that there is a very great range of variation in the class of cases under consideration.

In the first place, it has occurred to me that rapidly acute cases, the so-called cases of acute ulcerative appendicitis of catarrhal origin should take first place—as that is the variety most commonly coming under observation. In this class of cases there may or may not be present in the cavity of the appendix itself, a foreign body. If there chance to be some fæcal matter present at the time of the onset of the inflammatory action, it will soon become imprisoned in the appendix because of the swelling and œdema of the entire appendix, and particularly of that portion which corresponds to its base and through which communication is maintained with the cæcum. Because of this swelling there must necessarily be more or less imprisonment of fæcal matter within the cavity of the appendix. This soon becomes, under the inflammatory condition present, and because of the changed condition of the mucous membrane itself, more or less inspissated, and necessarily assumes the relation of a foreign body. Many of the cases coming under my observation in which fæcal matter has been found, have been cases in which the latter has been evidently imprisoned, since no other foreign substance was found. The fæcal matter was simply somewhat hardened from inspissation, and moulded to the shape of what was left of the cavity of the appendix. This is a class of cases which come more frequently under our observation than any other, and the sloughing process may be limited to the slight ulcerative action through which some portion of the contained fæcal matter may escape into the surrounding adhesions, if such adhesions have been formed, or the process may go so far as to produce sloughing of the entire organ as shown by the specimen which I now show you.

The class of cases second in importance, are the cases of subacute catarrhal appendicitis. Now, this class of cases occurs much more frequently than surgeons know anything about. During the past year and a half seventy-four operative cases of appendicitis have come under my observation. This is in addition to the twenty-eight cases which I reported a year and a half ago, but inasmuch as the others have been published, I have limited myself to the consideration of the last series. In this series of seventy-four cases a large majority of them were cases of the first class, that is cases of acute ulceration. Of the second class of cases—the subacute catarrhal forms—six cases have come under my observation in addition to the seventy-four, so that of the eighty cases six of them were cases of subacute appendicitis. It is scarcely necessary for me to say that I did not operate upon these six cases of subacute appendicitis; therefore, when the word is passed around that surgeons of the present day operate upon every case of appendicitis which comes under their care, I beg you will bear in mind the fact that I have seen six cases upon which I did not operate.

There is a class of cases of acute ulcerative appendicitis from the presence of a foreign body, so-called traumatic cases. Of my eighty cases, three came under this head. In one of them it is questionable whether the term appendicitis should be applied to it at all. It was a case of right iliac abscess occurring in my service at St. Mary's Hospital. The man gave a history of having swallowed a nail and in a few hours subsequently he experienced a great deal of pain in the epigastrium; this, after a hypodermic injection of morphine passed off, and in the course of ten days he began with the ordinary symptoms of appendicitis, with epigastric pain, which became generally distributed over the abdomen, finally centering in the right iliac region; the point of tenderness of McBurney was well marked. I saw him on the fifth day after the attack. A tumor as large as my fist was plainly to be made out. The man's condition was one of great exhaustion. An incision in the ordinary location, right lateral laparotomy, was made revealing the abscess. Upon opening this abscess and washing it out, two rather large gall-stones were washed out. Dr. Clayton, our pathologist, will pass around the specimen.

In this case, upon introducing my finger into the cavity, I discovered that the entire appendix had sloughed away, and that there was an opening leading into the cæcum through which my finger passed. That portion of the cæcum was empty, this being probably due to the localized intestinal paresis found in the neighborhood of the abscess around the appendix. Whether these stones had lodged in the folds of mucous membrane at the opening of the appendix itself, or whether they had actually entered the appendix I cannot say, but from their size and the ordinary size of the opening of the appendix, one may be led to doubt that the pressure exercised at the base of the appendix led to perforation there, and the destruction of the appendix was due to the fact that the wall of the cæcum sloughed through where the appendix was attached. That was the only case in which an indubitable foreign body was found in the abscess.

In another case the foreign body was evidently a desiccated or inspissated mass of fæcal matter. It resembled exactly the size and shape of a lemon seed. In former times this would have been carefully placed away in a museum as a case of lemon seed taken from the vermiform appendix. Upon crushing it proved to be otherwise.

The third case was one in which a date seed was found, the patient having acknowledged swallowing it some weeks previously. This is all of the eighty cases in which there was a foreign body. In the twenty-eight cases reported a year and a half ago, there was absolutely no trace in any of them of a foreign body which could have led to the occurrence of the disease. So in my judgment the presence of a foreign body is exceptionally rare, although still possible of occurrence.

There is a condition of chronic catarrhal appendicitis; this is a class of cases in which the inflammatory conditions persist for a long time, and in which tenderness can be discovered at the part of the abdominal wall corresponding to the base of the appendix for months afterwards. Of this class of cases five have been observed by me; in four of them I have removed the appendix, and in all of them have found a condition of thickening of the appendix for its entire length, more or less adhesions in the neighborhood binding the organ in a peculiar curled up condition not unlike a snail, and in which evidence of chronic inflammation of the mucous membrane of the appendix accompanied by swelling was found to be present. In these cases no pus forms, but the patient is on the verge of a volcano which may explode at any moment and destroy him. Of these five cases four have been operated on. The case from which the specimen was obtained which I now show you, had its first attack one year ago, its second attack six months ago, and its last attack one month ago; during each interval between these attacks there was present more or less tenderness at the McBurney point. The first two attacks were indubitable in character. In the third attack there was a peculiar condition present, the pain making its first appearance in the lumbar region, thence passed along the site of the right ureter and into the groin and accompanied by retraction of the testicle on that side. Had it not been for the fact that the patient had had two distinct attacks of appendicitis, and the physician attending him (Dr. Harrigan) gave me an account of an absolutely typical case of appendicitis in both the first attacks, I should have hesitated to operate on the strength of the second; yet the condition of the appendix as can be seen by the specimen, will demonstrate the wisdom of operating in this case.

As differentiated from the class which I have just mentioned—the chronic cases with acute attacks occurring from time to time—may be mentioned the cases of recurrent appendicitis, in which during the intervals there is no pain and no tenderness to be found on pressure, but yet in which there is an undoubted history of several recurrent attacks. I have in my mind an example of this, a patient that was sent into St. Mary's Hospital for appendicitis, or rather for a septic peritonitis of appendical origin. The patient was moribund, and I gave him the only chance he could possibly have had. I opened the abdomen along the outer edge of the right rectus muscle, under cocaine local anæsthesia, and found a very large amount of pus in his abdominal cavity. The patient lived six hours after the operation. Every attempt was made to clean the abdominal cavity except irrigation. I question if this latter procedure is of any benefit in this class of cases for the reason that the prolonged manipulation necessary to break down all the adhesions, and bring every portion of the abdominal contents within the reach of the flushing fluid is so great, prolongs the operation and increases the shock to such an extent that I have latterly thought it impracticable to carry it out. Formerly I did irrigate after the method of Gill Wylie, and thought it relieved temporarily the shock. I think, however, those who have had experience with this method will bear me out that the reaction which occurs after irrigation far outweighs the advantage gained by the temporary stimulation brought about by the presence of the hot irrigating fluid.

There are cases of relapsing appendicitis in the course of chronic appendicitis, but the most serious class of cases among the relapsing cases are the ones in which the relapse occurs while the patient is apparently progressing to recovery from an acute attack. One of the best observers, who has probably witnessed more operations for appendicitis than any one physician in this city, and who has furnished me with a number of cases for operation—a gentleman whose experience is such as to carry weight with his opinion and in whom the gentlemen present have the greatest confidence—asked me to see a case in consultation of this relapsing variety. It went on for three days with a perfect history of the ordinary case progressing to recovery. On the fourth day the patient sat up, his physician seeing no good reason why he should not. On the fifth day there was a relapse, and on the sixth day the patient's condition was alarming. I operated at nine o'clock that night and found a gangrenous appendix. That case evidently was a case of ordinary subacute catarrhal appendix, simple in its character and progressing to recovery. His attendant's fears were entirely allayed, and yet suddenly and with no provocation a condition was set up which became rapidly serious and necessitated an operative procedure upon the sixth day. A gangrenous appendix was found and removed. Unfortunately septic conditions were present at this time, a wide sloughing area was present in the post-peritoneal cellular tissue, and the sloughing process extended into the right iliac vein. On the fifth day following the operation, a violent hæmorrhage occurred, and from this and the septic conditions prior to the operation the patient succumbed. This case teaches us a lesson not to be deceived in cases where the symptoms apparently subside, and where a patient is seemingly on the high road to recovery. On the contrary we should bear in mind that relapses may occur when everything seems to be going on well.

As to the cases in which rapid primary perforation occurs. In speaking of perforation we should distinguish between primary and secondary perforation. By primary perforation is meant perforation of the appendix itself, its contents escaping into the adhesions in the neighborhood of the appendix. By secondary perforation is understood perforation of the abscess walls (a circumscribed abscess surrounding the appendix having resulted from infection of the mass of adhesions), permitting the discharge of pus into the general peritoneal cavity. The specimen here shown was taken from a patient in St. Mary's Hospital and is an example of this accident. The patient entered the hospital suffering with undoubted appendicitis. Up to four o'clock on the previous afternoon he was in perfect health. At this time he was taken suddenly ill with violent pain in the region of the umbilicus, vomiting, then general abdominal pain and tenderness, and finally pain in the right iliac region. There was marked rigidity of the right rectus muscle, very little distention, but as far as the rigidity of the muscle itself would permit me to ascertain there was an indurated mass in the neighborhood of the caput coli. The man absolutely refused operation. He had had some opium administered before he came into the hospital, and as a consequence he was feeling very much better than in the commencement of the attack. On the following day the temperature was lower, but the symptoms were simply masked by the opium, and there was no real improvement. Operation, however, was still declined, and at three o'clock in the afternoon of the second day the nurse reported a sudden change for the worse.

The house surgeon found him pulseless, collapsed, with blue lips and fingers, and all the evidences of impending dissolution. He died in an hour from the shock of perforation of an appendical abscess. The specimen on the table will draw you a more vivid picture and tell you the story more eloquently than I can.

The hour is late, but there are some conditions which in my experience may be mistaken for appendicitis, and I think it would be well to call your attention to them. In the first place, pyosalpinx has been mistaken in my practice for appendicitis. One such case was sent me by a professional friend, the patient having no symptoms further than a point of tenderness in the right iliac region. She was an Italian, could speak no English, we could get no history, and it was not easy to make the diagnosis. The case was an urgent one. It was necessary to open the abdomen, which was done on the line of the appendix. It proved to be a case of ruptured right pyosalpinx. Although the diagnosis was not correct, the operation was not contra-indicated.

Intestinal obstruction with the lesion producing the obstruction in the neighborhood of the appendix may be mistaken for appendicitis. Three cases of the eighty have been of that class. In one of them there was a constricting band. The patient was sent to me by Dr. McBurney. In this case I claim it would have been impossible to have ascertained what the condition was without opening the abdomen. There were present all the primary subjective and secondary objective local symptoms of appendicitis and intestinal obstruction. This patient had a diverticulum four inches in length, which sprang from a coil of intestine immediately adjacent to the site of the caput coli, which diverticulum had wound itself around a coil of intestine, its tip becoming inflamed and attaching itself to the mesentery thus producing intestinal obstruction. The patient made a good recovery, but it was a condition which was mistaken for appendicitis. The operation was undoubtedly indicated.

In another case a neoplasm had sprung from the post-peritoneal cellular tissue and had pushed forward, the tip of the appendix becoming attached to the neoplasm itself; coincidently with this symptoms of appendicitis asserted themselves. The patient had all the symptoms, including umbilical pain and tenderness, and pain in the right iliac region. On opening the abdomen the appendicitis was found to be limited to the tip of the organ; it had been excited by the presence of the cancerous growth which had not theretofore been suspected. Another instance of this kind occurred in which a neoplasm, springing from the retro-peritoneal glands had pushed forward on the right side in the neighborhood of the caput coli. There was a tumor in this case, but a sudden attack of general abdominal pain followed by tenderness in the right iliac fossa, and point tenderness occurred. A neoplasm was found, but there was no appendicitis present.

In another case rupture of the gall-bladder occurring in a man during intoxication, who gave a history of vomiting, epigastric pain followed by pain in the right iliac fossa and point tenderness simulated appendicitis. The abdomen being opened the true condition of affairs was discovered.

Now there are certain conditions more or less grave which complicate appendicitis. Of these we may mention septic peritonitis. This must be differentiated from the condition of suppurating fibrinous peritonitis, which is occasionally observed.

Thirteen of the eighty cases which I have under consideration to-night died of septic peritonitis, which was in existence before the performance of the operation. They were all cases of infiltration of the pus into the peritoneal cavity. There also were cases in which the condition was complicated by intestinal paresis, one case not operated on in which the complication was that of rubeola. I must not forget to mention a case in which a woman six months pregnant was attacked with appendicitis, aborted the day following operation and promptly died; nor yet another in which appendicitis complicated the puerperal period occurring on the third day following delivery. The physician in charge of the case diagnosed the appendicitis early; on opening the abdomen the diagnosis was confirmed, the appendix removed, and the patient made a good recovery.

I regret exceedingly that Dr. Hopkins has left the room, for the reason that I had intended to offer some criticisms upon his cases of a character which courtesy will not permit me to make except in his presence.

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PITYRIASIS MACULATA ET CIRCINATA.

BY GEORGE D. HOLSTEN, M.D.,

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This disease, also known as pityriasis rosée of Gibert, is one of the less commonly met with diseases of the skin. Crocker gives its frequency in London as one in 300 cases; while Bulkley, in New York, records thirty-five cases of pityriasis in 8,000 cases of skin-disease, but does not distinguish between different affections included under the term pityriasis.

Within the past few months three cases have come under my observation whose histories are as follows:

Case I.—M. W., female, aged 30, applied at clinic February 11, 1892, for treatment for an eczema of the hands, moist, scaly, fissured and painful, of over a year's duration; and probably due to her occupation—washing clothes. At her next visit, a few days later, she called my attention to an eruption on the body, which she stated had existed for some two weeks, and had first begun around the waist; from there it had gradually spread, until on the day I first examined her the entire abdomen, chest below the breasts, and back from the lower ribs to the buttocks were covered with the eruption.

This consisted of small, circular, light rose-red spots covered with a small amount of thin scale. The primary lesions varied in size from a split pea up to half an inch in diameter; above this size the spots began to show a clearing up in the centre, which in the smaller ones was of a yellowish-red color, while in those lesions which had attained a diameter of an inch or over, this clearing centre passed insensibly into a buff or fawn color. In several places the rings thus formed had become confluent with others, and irregular, broken circles had resulted. Its resemblance to ringworm was very marked, and such at first sight I thought it to be, but established the diagnosis from the abundance of the eruption on the trunk, its total absence on other portions of the body, and the absence of the trichophyton fungus in scrapings of the scales.

Subjective symptoms were entirely absent, and patient experienced no annoyance whatever from the eruption.

She subsequently passed out of my observation, so that the ultimate termination of the disease is unknown to me.

Case II.—N. M., female, aged thirty. Dressmaker by occupation, in good general health, except costive. Applied March 22, 1892, for an eruption which had existed five weeks. The eruption had been preceded for a short time by hot and cold sensations running up and down the back, and by hot flashes over the entire body. These latter symptoms persisted during a greater portion of the duration of the disease.

The eruption first began, according to the patient's statement, as small red dots on the abdomen around the waist line. In a few days these individual lesions became larger, new ones appeared over other portions of the abdomen, on the chest, and in either axilla; shortly after the affection passed downwards on to the thighs, appearing first on the inner side, then later on to the legs.

Present condition.—In each axilla is a broad, bright rosy-red patch, the margins of which break up into smaller circular or oval patches, with clearly-defined borders, the centres of some of which are of a lighter yellowish-red hue, while in other places lesions have run together and patches with irregular, scalloped borders have formed. Over the abdomen the eruption consists mostly of irregular patches and broken confluent circles, and is of a delicate rose-red color. On the thighs the eruption, slightly more dusky in color than is that on the axilla, is in small spots, discrete and confluent. Under the right knee is a patch irregular in outline and slightly scaly. Over inner right ankle another small circular patch.

All of these lesions are intensely itchy; not at all elevated; and almost all of them are smooth and shiny, but were at one time scaly, and two weeks ago are said to have scaled off in large flakes. Patient has applied carbolic salve, tar salve and vaseline, and the irritated, inflamed appearance of some of the lesions are probably due to these applications. Bowels are costive; also suffers from frequent headaches.

She was ordered a two per cent. ichthyol and zinc ointment, and given cascara sagrada.

On March 24th the eruption on abdomen began to clear up, the yellowish or fawn-colored centre becoming larger. In the axillæ and on the lower extremities the conditions remained about the same. Still itchy, but not so severe as it was.

On the 26th the eruption in axillæ showed signs of fading, the entire surface of the patch becoming lighter in color. This fading was most marked over the outer edge of the shoulder-blades, where only buff-colored discolorations were now present. Over the abdomen it had to a great extent passed away, but where the clothing bound around the waist was still most marked, and here the fine branny, typical scaling was seen. Over the outer left knee new points of efflorescence had appeared, attended by considerable itching. These spots were not much more than from three to five mm. in diameter, were discrete, of rather brighter color than the older lesions, were slightly raised, covered with fine branny scales, and some already showed a difference of color in the centre. Around the ankle the eruption had also become more abundant. The itching which formerly had interfered with sleep had considerably abated.

Menthol one-half per cent. had been added to the ichthyol ointment and gave marked relief from the pruritus.

From that time until April 5th, the eruption gradually faded away excepting over the knee and ankle where new spots appeared for a short time. About the 23d these also began gradually to fade and in the early part of May had entirely disappeared.

Case III.—A. S., female, æt. fifty-two, came to the clinic April 30, 1892. Duration of the eruption four weeks. First began on thighs and gradually spread down the legs, but never appeared on the abdomen. Within a few days it has appeared on the flexor surface of the forearms.

Present condition.—The eruption on lower extremities apparently began as small reddish or reddish-brown macules; becoming larger, the formation of small scales took place, on some lesions quite abundantly. Becoming still larger a yellowish coloration appeared in the centre, so that the lesions assumed a ringed shape, and the edges of closely lying lesions running together, a variegated appearance of broken circles was presented.

On pushing up the sleeves an abundant amount of scales fell down, leading one to entertain the thought of a psoriasis, but the total absence of lesions over elbows, and the light rose-red circular appearance of some on the flexor surface of forearms proved the contrary; but most of the lesions in this situation were circular spots, varying from three to ten mm. in diameter and covered with quite an abundance of scales. The general color of those on the upper extremity was many shades lighter than of those on the lower extremity. Some of the lesions on the thigh were black, where the patient had applied ink on a copper penny under the impression that the disease was ringworm.

There was no constitutional disturbance, and subjective symptoms limited to slight itching whenever patient becomes warm. Beyond costiveness, nothing else called for treatment outside of the skin trouble.

May 3d. The clearing in the centre of all the lesions was to-day well marked; the yellow showing strongly against the faint red margins of lesions on upper extremities and against the dusky red margins of those on lower extremities. Scale formation nearly *nil.*

[The patient was shown at the May meeting of the Brooklyn Dermatological and Genito-Urinary Society.]

May 10th. The eruption on forearms entirely gone. Still persistent and well marked on both thighs and legs.

By the end of May the lesions on the thighs and legs had entirely disappeared.

This disease was first described by Gibert in 1860, and named by him pityriasis rosée. In 1868, Bazin also described it under the title of pityriasis maculata et circinata, and it was also referred to under that term by Hardy. Horand wrote of it as pityriasis circinata. In the 1883 edition of Kaposi's work, its separate existence as a disease of the skin is denied, and it is regarded as a variety of tinea circinata. In the classification of the American Dermatological Association the affection was placed under the title of pityriasis maculata et circinata.

Brocq in the last edition of his work on dermatology divides this disease into two forms: I. Pityriasis circinata et marginata, and II. Pityriasis rosea, Gibert. The former, he says, is characterized by small, red, hardly raised, dry spots (or flecks) situated on the trunk, arm or thigh; these increase but slowly so that after a month's time they have attained no larger size than a one franc piece. They then begin to clear in the centre, assuming a ring form, the margins retaining the rose-red, slightly scaly appearance. In certain places of predilection, as in the inguinal regions and axillæ, the patches become confluent and circinate plaques are formed. In certain cases patches take on an inflammatory reaction, and then present an appearance like Hebra's eczema marginatum.

This form is chronic, often persisting many months. It is distinguished from the second form in not having the same situation, nor following the same course.

The second form which Brocq designates pityriasis rosea, begins as a single primary, oval or circular spot situated on the trunk usually around the waist line where the clothing binds, though it may occur on the neck or arm, and is of a lively red color, with fine, adherent, scaly border. The centre is brownish-red and appears slightly sunken. This Brocq speaks of as the primitive spot. The size varies from one to ten millimetres in diameter.

This persists from four to fourteen days when many other, small, secondary points of eruption appear as rose-red spots or papules, which, however, soon become flat. They gradually enlarge, increase in number and become covered with small scales, sometimes becoming confluent, sometimes remaining isolated.

They are seated at first on the neck, chest or sides of thorax and from there invade the upper portion of the body and upper extremities, but seldom the hands, lower extremities, feet or face. This form may be seated on the upper portion of the trunk and remain there only, never spreading to other surfaces, but by the enlargement and confluence of individual lesions, large red patches are produced which may assume the appearance of pityriasis maculata, or well marked ringed lesions, spreading, and of strong medallion-like appearance (pityriasis circinata) may result.

This form disappears in from four weeks to four months, and, according to Thibierge, never recurs. Tenneson presented a case to the French Dermatological Society in November, 1891, where the initial spot situated on the left forearm, had been present six weeks before a universal outbreak occurred.

From this description as given by Brocq it will be seen that the differences between the two forms are not great, and that they frequently merge one into the other; the main points of difference being as regards the duration of the disease, the first persisting a long time, the second ending spontaneously on an average in about two months; and secondly, as regards the location, though here both forms after a time invade a like territory.

The eruption will vary much in extent; sometimes, as in my first case, being confined entirely to the abdomen and back, or, as in the third case only to the extremities; while at other times it passes over the entire body, developing in one place while disappearing in another.

Subjective symptoms also vary very much. In some cases the eruption is preceded or accompanied by febrile disturbance, which is usually only of short duration, though it may become severe. Itching also varies considerably. In the second case reported above, the itching accompanying the disease was quite severe and compelled the patient to cease her occupation in order to seek relief; while in the first case there was an entire absence of itching and the patient would not have paid any attention to the disease had it not been for another affection for which she applied for relief. In the third case the subjective symptoms were slight, itching being present only at night or when becoming heated, and then only to a very slight extent.

Blaschko, of Berlin, divides this disease into four varieties: 1st, one in which the lesions are sharply contoured; 2d, consisting of small flecks which are not so sharply contoured; 3d, a variety limited to the immediate vicinity of the smaller follicular openings, and 4th, a variety resembling acute seborrhœal eczema and appearing mostly in the axillæ.

No positive cause for this disease has as yet been discovered. Microscopical examinations of excised portions of skin have not shown anything beyond slight inflammation. From its superficial nature, its creeping or extension peripherally over the surface, it has been by many thought to be due to some parasite, and, indeed, Kaposi regards it as a form of tinea tonsurans. Vidal describes a fungus which he has named microsporon anomæon seu dispar, which he found in the scales, and which he regards as the causation of the disease. "These spores are arranged in circles in the epithelium of the upper and middle layers of the epidermis, but occasionally in heaps in and about the epithelium ; rarely chains of spores are seen. Five or six spores have a diameter of less than one millimetre, and look like small black points arranged in lines." (Weyl, in Ziemssen's Encyclopædia.) But as his description accords more with a micrococcus than a fungus, and as cocci are frequently found in the scales of desquamating dermatoses, these cannot be considered as the cause of the affection.

Borduzzi subjected the scales of three cases to a very careful bacteriological examination without finding anything except the ordinary micro-organisms of the skin. The cases healed in from three to eight weeks. He does not think it of parasitic origin.

It was in the circinate and maculate form only that Vidal found his fungus, and only in one case.

Bazin thought it occurred in the first half of life, in lymphatic, scrofulous individuals. Horand, that it appeared not infrequently after a profuse perspiration. Crocker says it is more frequent in children, but may occur at any age, while Duhring records encountering it only in adults.

It is not considered contagious, but Peroni records an epidemic of it.

Recently Lassar reported to the Berlin Dermatological Society that he had met with twelve cases in which the affection appeared within a few weeks after the patients had put on newly purchased, unwashed, heavy woolen or tricot underclothing, stockings, etc., and he therefore considered that this factor stood in some causative relation to the disease ; but Max Joseph pointed out that other dermatoses were oftentimes produced by the same cause, and instanced lichen planus.

This disease is to be distinguished from ringworm of the body by the extent of distribution, the development, and the absence of the characteristic fungus of trichophyton in the scales when examined under the microscope.

Tinea versicolor is never in circles, but irregular patches, is of a peculiar light brown color, can easily be scraped off with the fingernail, spreads slowly, and shows its spores under the microscope.

Syphilitic roseola is general, scaling is absent, the individual lesions do not spread peripherally, there is not the clearing fawn-colored centre, and constitutional symptoms are usually present.

The later syphilitic eruptions are more apt to be multiform, and invade the deeper portions of the skin.

The early lesions of pityriasis rosée bear a strong resemblance to a beginning psoriasis, but a little careful observation will show in the former the scaling to be less, also the absence of elevation, of bleeding points after removal of the scales, and of lesions on elbows and knees, all so characteristic of psoriasis.

Seborrhœic eczema on the trunk bears a striking resemblance to this disease. It oftentimes occurs as a serpiginous, papular, ringed eruption, associated with seborrhœa ; usually limited to the middle and front of the chest and the interscapular region, but may spread over the entire trunk. This also begins as a disk composed of small papules which enlarge peripherally and leave in the centre a fawn color. It is more raised than pityriasis rosée and scaliness and greasiness are always present ; around the edges of the lesions are papules, and it occurs most frequently in those who perspire freely, wash sparingly and wear thick, heavy, flannel underclothing infrequently changed.

The affection tends to spontaneous recovery and in many instances simple attention to hygiene and diet are only required. Nevertheless, the disappearance of the eruption can be accelerated and subjective symptoms require attention. Vidal recommends sulphur baths. Brocq an ointment of precipitated sulphur five parts, soap ten parts and vaseline ninety parts, with daily warm baths. I have found applications of ichthyol in paste or ointment form, with the addition of menthol and warm baths, useful to allay the itching ; and that resorcin effected the disappearance of the disease as rapidly as any other remedy.

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CHOLERA MEDAL.

The picture which illustrates Dr. Otterson's paper in the special edition of the JOURNAL of September 10th, is of the bronze medal issued by the city of Paris after the cholera epidemic of 1832. The original is in the collection of Dr. Joseph H. Hunt.

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EDITORIAL.

AMERICAN GYNÆCOLOGICAL SOCIETY.

The meeting of this Society in Brooklyn took place September 20–22. We publish elsewhere the programme of the meeting, which was a rich treat to all who were present. Never in the history of the Society has it been more generously entertained, either by its individual members or by sister societies. The remembrance of the Brooklyn meeting will always be a pleasant one, not only to the fellows of the Society, but also to the physicians of the city who were honored by the presence of so many illustrious members of the profession, to whose words of wisdom they listened with so much profit.

The address of the President was a presentation of the facts concerning hysterectomy, and a masterly argument in favor of a less radical and a more promising method of treatment of those diseases which demand operative interference.

The November number of the Journal will be devoted to a full report of this meeting.

SPECIAL MEETING OF THE COUNTY SOCIETY: AND A NEW BUILDING.

The special meeting of the County Society was doubtless the largest gathering of medical men this city has ever seen. The rooms of the Society were entirely inadequate to hold them and the meeting adjourned to Everett Hall. There were 325 members present. Nothing has more clearly demonstrated the necessity for enlarged accommodations for our members than the fact that although the membership is very nearly five hundred, yet when three-fifths of this number attend a meeting, the audience hall is too small to accommodate them. The utter inadequacy of the rooms has been before repeatedly shown, notably on nights of elections, but never so satisfactorily demonstrated as on the night of September 6th. It seems to us that the present location is altogether too restricted for the accommodation of the Society and that the Trustees must look elsewhere for a site for a new building. Any extension of the present structure can only be in one direction, the result of which will be to give a long and narrow audience hall, at the further end of which it will be impossible to hear either the President or the speakers. Our library is increasing and is too valuable already to risk in anything but a fire-proof building. The next move must be into a building which is modern in its appointments and calculated to supply the needs of the Society for the coming fifty years.

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SPECIAL EDITION OF THE JOURNAL.

The special edition of the JOURNAL, which appeared September 10th, shows what can be done when the occasion demands it. It was the earnest desire of the President that the proceedings of the meeting of September 6th, called to discuss the subject of cholera, should be given to the profession at the earliest possible moment. The Society was in session until 11 P.M., and the stenographer's notes were not all given to the printer until late in the afternoon of the 8th, yet by the 10th the edition was ready and in the mail for distribution. The remarks of those present make a most valuable compilation of the history of cholera in Brooklyn, and of the methods of its management and treatment. Whatever the future may have in store for us with reference to the advent of cholera, this little volume will be treasured as a valuable book of reference.

CHOLERA AND THE HEALTH OFFICER OF THE PORT OF NEW YORK.

The all-engrossing subject of conversation, both by the laity and the profession, is cholera. Its ravages in Asia, amounting in Persia alone to thirty thousand deaths, and its rapid spread in Europe, has excited an interest in this country as wide-spread as the country itself. Especial attention has naturally been directed to the unfortunate passengers on board the *Normannia*, *Rugia* and *Moravia* in the Lower Bay. While the equipment of the Quarantine Station is ample to meet certain emergencies, it is certainly wanting in respect to furnishing an asylum for passengers who are in health, but who may by accident be in infected ships. To retain these people on such ships is a remnant of barbarism, but the responsibility cannot be laid at the door of the Health Officer of the Port. He is an executive officer whose duty is to enforce the law with the means provided by the State, and can do no more than the outfit furnished him by the State will permit. So far as we can judge he has proved himself to be both capable and zealous, and his willingness to advise with such expert sanitarians as Drs. Sternberg, Gihon and Hamilton shows that he has discretion as well. The position he occupies, although much sought after in the past, is one of great responsibility in such times as these. Dr. Jenkins may be assured that he has the sympathy and confidence of the whole medical profession in his arduous task of caring for the stricken at Swinburne Island and of keeping the plague from these two great cities. He may also take comfort in the thought that if we escape an epidemic this year, before another summer comes, such representations will be made to the Legislature as will give him increased facilities with which to handle well passengers on infected vessels, and money enough to complete and perfect the disinfecting plant which has shown itself to be indispensable.

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REPORT OF CHOLERA IN EUROPE AND ASIA.

Through the generous courtesy of Mrs. Mary Coombs Fox, widow of the late Dr. Sidney Allan Fox, the library of the Society is in possession of this superb and already classical work of Dr. E. O. Shakespeare.

The nine hundred pages of text, together with the many illustrations and diagrams, and forty-five pages of index, constitute a ponderous treatise, not only on cholera but on many allied matters and diseases. We need but cite the admirable drawings of malarial organisms opposite page 696.

Despite the vast amount of material incorporated in the book, the labor of preparing it has been greatly reduced by free quotations from the many special works and regulations bearing on the subject. As to the value and appropriateness of all this, it need only be said that it is justified by the author's warrant as a U. S. Commissioner. Still, like many of the best products of medical effort, especially in continental countries, it could hardly have been ever published without donated support. The thorough success of this work by a civilian appointed, ought to establish as a precedent the further occasional recognition of extra-official medical men.

PROCEEDINGS OF SOCIETIES.

AMERICAN GYNÆCOLOGICAL SOCIETY.

This society held its annual meeting in Brooklyn, September 20–22d, the President, Dr. John Byrne, of Brooklyn, in the chair.

The following was the programme:

FIRST DAY.

Tuesday, September 20th. Morning session at ten o'clock. Roll call, reception of guests, etc.

Address of Welcome, by Dr. Charles Jewett, of Brooklyn.

Papers: "Periodical Intermenstrual Pain," by Dr. Chauncey D. Palmer, of Cincinnati; "Oxygen in the Treatment of Septicæmia," by Dr. Andrew F. Currier, of New York; "Technique in Plastic Surgery of the Cervix Uteri, Vagina and Perinæum," by Dr. William H. Wathen, of Louisville; "Pyosalpinx, with Report of Cases," by Dr. Archibald McLaren, of St. Paul.

Afternoon session at three o'clock. "Elective Cæsarean Section—Time of Operation," by Dr. Henry C. Coe, of New York; "The Remarkable Results of Antiseptic Symphysiotomy," by Dr. Robert P. Harris, of Philadelphia; "Cœliotomy after Labor," by Dr. William H. Parrish, of Philadelphia; "Stomatitis due to the

Irritation of Epithelial Pearls in the Mouths of New-born Infants," by Dr. Henry J. Garrigues, of New York.

SECOND DAY.

Wednesday, September 21st. Morning session at ten o'clock.

"Certain Aspects of Gonorrhœa in Women," by Dr. Charles P. Noble, of Philadelphia; "Retro-peritoneal Tuberculosis Simulating Hernia," by Dr. Edward P. Davis, of Philadelphia; "The Treatment of Post-partum Hæmorrhage," by Dr. Egbert H. Grandin, of New York.

Afternoon session at three o'clock.

President's Address.

"Supra-vaginal Hysterectomy for Uterine Fibroids—Report of Fourteen Cases," by Dr. William M. Polk, of New York; "Supra-vaginal Hysterectomy with Sub-peritoneal Treatment of the Stump without Ligature, in Operations for Uterine Fibro-myomata," by Dr. B. F. Baer, of Philadelphia; "Vaginal Hysterectomy for Cancer of the Uterus," by Dr. Hermann J. Boldt, of New York.

Business meeting, 5:30 to 6:30 P.M.

THIRD DAY.

Thursday, September 22d. Morning session at ten o'clock.

"In Memoriam—Dr. Gilman Kimball," by Dr. Francis H. Davenport, of Boston; "Can we Prevent Secondary Hæmorrhage after Ovariotomy?" by Dr. Horace T. Hanks, of New York; "The Experience of the Boston Lying-in Hospital in the last Five Years in the Treatment of Eclampsia," by Dr. Charles M. Green, of Boston; "The Value of the Forceps in Complicated High Arrest of the Breech, with Report of Two Cases," by Dr. Edward Reynolds, of Boston; "The Best Management of Occiput-posterior Cases," by Dr. Chauncey D. Palmer, of Cincinnati.

Afternoon session at three o'clock.

"Umbilical Hernia in the Female, with Report of Five Cases," by Dr. A. Palmer Dudley, of New York; "Conservative Laparotomy," by Dr. William M. Polk, of New York; "The Ætiology of Intra-pelvic Effusions of Blood," by Dr. Florian Krug, of New York.

The members of this Society, as also those of the N. Y. Obstetrical Society, were entertained by the President, Dr. A. J. C. Skene, Dr. Charles Jewett, the Medical Society of the County of Kings and the Brooklyn Gynæcological Society.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A special meeting of the Medical Society of the County of Kings was held on Tuesday evening, September 6, 1892, at the Society Rooms, 356 Bridge Street, but owing to the large number present was immediately adjourned to the Everett Assembly Rooms, corner of Willoughby and Bridge Streets.

There were about 250 members present.

The reading of the minutes was dispensed with.

The President, Dr. Z. T. Emery, called the meeting to order at 8:15, and introduced Dr. John Griffin, Health Commissioner of Brooklyn, who described the workings of his department.

On motion of Dr. J. H. Raymond the following resolution duly seconded, was unanimously adopted:

Resolved, That the Medical Society of the County of Kings heartily commends the efforts made by the Commissioner of Health of the City of Brooklyn to prevent the introduction of cholera into Brooklyn, and pledges him its hearty support and coöperation.

The Chair stated that Dr. Jenkins and Dr. Cyrus Edson had promised to be present, but had been obliged to send letters of regret.

Dr. George M. Sternberg spoke on "Bacteriology and Disinfection of Cholera."

Dr. Albert H. Gihon spoke on "Hygiene and General Sanitary Conditions."

Dr. A. N. Bell spoke on "Practical Sanitation vs. Detention."

Drs. E. S. Bogart and Charles U. Gavatt, both of the U. S. Naval Hospital related their experiences in the treatment of cholera.

Dr. Andrew Otterson related his experience with cholera in the three epidemics in Brooklyn in 1848, 1854 and 1866.

Owing to the lateness of the hour, the following part of the programme was announced as read by title only, the matter to be published with the proceedings of this meeting in a special edition of the BROOKLYN MEDICAL JOURNAL.

"Epidemic of Cholera in Brooklyn in 1866," by Dr. F. H. Colton; "The Preparation of the City of Brooklyn for the Anticipated Epidemic of Cholera in 1884 and 1885," by Dr. Joseph H. Raymond; "A Typical Case of Cholera," by Dr. S. E. Fuller; "The Pathological Findings in Cholera," by Dr. Joshua M. Van Cott, Jr.; "The Treatment of Cholera," by Dr. John A. McCorkle.

On motion the meeting adjourned.

[For full stenographic report of this meeting, see special edition of JOURNAL, September 10, 1892.]

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M.D.,

Surgeon to St. Mary's Hospital and to the Methodist Episcopal Hospital, Brooklyn, N. Y.

NEW PROPOSAL FOR RADICAL TREATMENT OF ABDOMINAL HERNIA.

Bottini (Centralblatt für Chirurgie, No. 18). B's aim, in radical treatment of inguinal hernia is to close well the internal abdominal ring, as every hernia originates from the interior ring. His procedure is as follows: After splitting after Bassini, the canal, at the lower and upper side of the interior ring, two or three thick catgut loops are led from within outward by means of Hagedorn's needle, the superior loops grasping the transversalis muscle internal oblique and tendon of external oblique, the inferior ones including the whole thickness of Poupart's ligament. The loops being tied, B. arouses the patients sufficiently and induces them to cough in order to ascertain whether the closing is quite reliable, and applies, if necessary, another loop. Then the skin wound is closed. In a similar way the author treats umbilical and femoral hernia.

B. never prescribes a truss after operation. All his thirty-one patients were free from recurrences without wearing a truss, all these operations being performed in 1890 and 1891 with but one exception. One patient was operated upon in 1886 and he, too, has not suffered a recurrence up to the present time.

MODIFICATION OF BASSINI'S RADICAL OPERATION FOR INGUINAL HERNIÆ.

F. Parona (Gaz. med. Lomb., December 26, 1891). Not wholly satisfied with Bassini's radical operation for inguinal herniæ and its modifications (Postempski, Mugnai, Ferrari, Bottini), Parona proposes a new method as follows: The inguinal canal being split, as in Bassini's operation, the neck of the hernial sac is isolated and ligated as centrally as possible; it is then removed, a stump of one centimetre in length being left. Now the spermatic cord is isolated and placed around the furrow of ligation, the latter being surrounded almost on all sides by the spermatic cord. The left remainder of hernial sac is then sutured to the abdominal ring, the spermatic cord, in this way, being placed between two folds of parietal peritonæum. For the rest the operation is accomplished after Bassini, *i.e.*, union of muscular layers with Poupart's ligament; fixation of spermatic cord below aponeurosis of obliquus externus, suture of skin wound.

P. treated fourteen patients in 1891, after this method, in no case heretofore a recurrence being observed. A truss is not prescribed after operation.

SOME VARIETIES OF CONGENITAL INGUINAL HERNIA IN FEMALES, ESPECIALLY HERNIÆ COMPLICATED WITH A CYST OF NUCK'S CANAL AND HERNIÆ "EN BISSAC."

Paul Berger (Bull. et Mem. de la Soc. de Chir. de Paris, No. 17, p. 283). On the basis of two observations B. states the following points as symptoms of congenital origin of inguinal herniæ in females, consequent to missing or complete closure of Nuck's canal:

1st. The existence of smooth fibres of muscles in the hernial sac, representing a continuous layer, corresponding to the tissue of dartos.

2d. The great abundance of vessels in the sac, continuous with those passing out of the inguinal canal and following the round ligament.

3d. The existence of incomplete septa that pass into the cavity of the hernial sac in the shape of diaphragms, semilunar folds, or valves.

4th. The existence of a complete septum separating the peripheral portion as a closed cyst.

5th. Finally, and especially the very solid connection of the thin serous wall of the sac with the round ligament which it (the sac) accompanies as the vaginal process of peritonæum does the spermatic cord in the male.

B's two cases are accurately described in the original.

The communication, besides, contains one of the rare cases of interstitial inguinal herniæ in females.

MOSS PASTE-BOARD AS A SURGICAL DRESSING.

Campbell (Med. Chron., February, 1892). The author recommends very highly Hagedorn's moss paste-board, that heretofore was but little used in England.

FRANCIS MAURICEAU.

This eminent French accoucheur, was born in Paris, in 1637; where we are told that he applied himself with great industry to the study and practice of surgery, especially in the great Hotel-Dieu, for many years before he commenced public practice ; so that he rose almost at once to the head of his profession.

For forty years Mauriceau practiced midwifery in Paris, and he considered no department of medicine or surgery superior to it in dignity and utility. At this period and for more than a century after Mauriceau's death, it was generally regarded as beneath the dignity of a physician to practice this branch of our profession ; indeed during the first quarter of the present century, the Royal College of Physicians in London did not admit as a fellow any man who practiced midwifery. His reputation was farther increased by his writings, and maintained by his prudent conduct, and acknowledged skill, during a long series of years ; after which he quitted practice entirely, and retired into the country, where he died at an advanced age, in 1709.

He was the first to confine his patients in bed—a bold innovation, as the obstetric chair was looked upon as the only proper place for a confinement. Accoucheurs were engaged in endeavoring to perfect the obstetric chair, very much as their successors of the present day are experimenting and striving to perfect the forceps ; and styles and patterns of the "sella lochæa obstetricia seu obstetrica" were as varied as the modern instrument. It has been said that the advent of the obstetric chair marked an era in the history of the art; and it may be as well said that the abandonment of it marked another, to be so soon followed by the great epoch which is marked by the invention of the obstetric forceps. A fourth epoch was begun when anæsthesia was introduced.

For twenty-five years he preserved faithful histories of all the important cases which came under his care, and out of 3,000 he selected 700 of the most important for publication. He published his great work "Traité des Maladies des Femmes grosses, et de celles qui sont accouchées, in 1688, at Paris.

In this work which was so well received that it was soon published in most of the languages which had a medical literature; and was often reprinted both in French and Latin at home; his description of the anatomy of the parts involved in labor is good. He treats of the pregnant state and the diseases connected with it, and then takes up the subject of labor. He recommends version in difficult cases, but is at a loss how to extricate the head when fixed in the pelvis ; advocating the use of fillets, and the opening of the head with a spear-shaped knife to allow the introduction of his "*tiretete*" which seems to have consisted of two metal disks, one of which was to be introduced through the incision in the child's cranium, and the other was to be forced against the exterior of the cranium by means of a long screw which also served as a handle by which traction was made. In his third book, he considers the diseases of the puerperal period and of children. It is chiefly valued by the physicians of to-day, for the larger number of cases which he describes with painstaking accuracy. The writer's library contains the fine quarto edition of his works which were collected and published in two volumes, at Paris, after his death in 1712.

J. H. H.

Its powerful absorbing power is based, as Chamberlain's microscopical researches proved, upon the moss absorbing intracellularly, cotton securing but an intercellular absorption. Microscopical examination of a moss cushion saturated with pus reveals that the cells of the moss are densely filled with pus corpuscles ; while in case of cotton, pus cells are found only between the single fibres. In the latter case, therefore, almost all the pus corpuscles may be removed by irrigation, while moss dressing being applied, the pus is retained in spite of rinsing.

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OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children, and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief to the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

THE EXPECTANT TREATMENT OF THE PLACENTAL STAGE OF LABOR.

Beaucamp (Arch. f. Gyn., B. 42, H. 1). Numerous observers, especially Schultze, Ahlfeld, Stratz, Schröder and E. Cohn have endeavored to prove that the separation of the afterbirth and its extrusion into the lower uterine segment and the vagina may be left wholly to nature. Ample clinical studies of the question, however, have disproved their claim. The placenta fœtalis is at the most expelled only so far as the vagina and it draws after it the contiguous membranes. Usually, in the dorsal position of the patient, the placenta cannot pass the obstruction offered by the pelvic floor. Complete spontaneous expulsion is, therefore, exceptional unless the pelvic floor be torn or specially lax. Nature unaided is not equal to the extrusion of the placenta from the intact vagina. Usually the placenta will, without interference, remain lying there and the membranes retain their attachment to the lower uterine segment. In such a case the afterbirth must be removed by manipulation. Schröder relies on pressure above the pelvic symphysis. Ahlfeld and Cohn use simple pressure to the fundus without compression. Their methods after all do not differ essentially from Credé's. The necessity for placental expression is acknowledged by all. Difference of opinion obtains as to the time for interference.

Ahlfeld advocates waiting one-and-a-half to two hours after the birth of the child in case earlier interference is not called for by hæmorrhage or other incidents.

Campe and Städfeldt have from their researches reached entirely different conclusions. Beaucamp has also investigated the question. His material comprised five hundred cases in the clinic at Cologne. Unless dangerous bleeding occurred the patient was allowed to lie for two hours in the placental stage without manipulation of the uterus. All the blood lost was collected and weighed, three hundred grammes being regarded by B. as the normal limit. The results of the expectant plan of treatment in the five hundred cases were as follows: 55 per cent. were without incident. There was hæmorrhage in 32.6 per cent. Retention occurred in 20.4 per cent. Spontaneous separation of the placenta in 11.6 per cent. The showing is not a flattering one for the expectant treatment. An abnormal course in 45 per cent. does not commend the waiting plan.

In reply to the possible objection that the hæmorrhagic cases would have bled still more freely had interference been practiced earlier, the author submits that as the hæmorrhage ceased immediately on the delivery of the placenta, it is fair to assume that the same would have happened had the delivery been accomplished earlier and that the total blood loss would therefore have been less under the plan of Credé. We are justified in the conclusion, that the presence of the afterbirth in these cases occasioned the hæmorrhage.

In eighteen cases the placenta had to be delivered manually before the expiration of two hours, in consequence of hæmorrhage. In fourteen cases hæmorrhage occurred after the delivery of the placenta.

The percentage of fever cases was 64.6 per cent., of deaths 0.2 per cent. The morbidity and mortality of child-bed, however, the author observes, depend more upon imperfect antisepsis than upon the management of the third stage. On the whole B. concludes, that while the separation of the placenta can generally be left with safety to nature Ahlfeld's hard-and-fast rule of waiting one-and-a-half to two hours is not sound.

B.'s practice is a compromise between Credé's and that of Ahlfeld.

In 444 cases record was kept of the method of placental expulsion. In 373 it took place according to Schultze, 84 per cent.; in 71 according to Duncan, 16 per cent.

B.'s tables show that the retention of membranes has little or no effect upon the morbidity.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

THE CURE OF OSTEOMALACIA.

Velits (Zeitschrift für Geburtshülfe und Gynäkologie, Band xxiii., 1892) states that formerly eighty per cent. of the cases of puerperal osteomalacia died, and it was not until a few years ago that, in doing a Porro operation in a woman suffering from this disease, it was found that the patient rapidly recovered from her osteomalacia after the operation. From this Fehling was led to experiment by removing the ovaries. It was found that this operation produced a cure in every case, the excessive and almost unbearable bone pains disappearing in from twenty-four to forty-eight hours.

The examination of the urine and blood has not as yet given any clue as to the cause of this peculiar disease. It is found, however, that during menstruation the general condition becomes much worse. The blood-vessels of the removed appendages, as in pregnancy, are increased in size, though the ovary has not as yet shown any special changes. The pain immediately decreases after the operation.

The fertility of these patients suffering from osteomalacia is greatly increased, probably because of excessive functional activity of the ovary. Even after the disease becomes pronounced, the frequency of conception is remarkable.

Fehling is of the opinion that this disease has its origin in pathologically increased ovarian function, which keeps the vasodilators of the bone blood vessels in a continued state of reflex spasm, which in turn produces congestion and the resorption of the bony substance.

Pregnancy is not the only condition producing this disease; even though it be the result of another cause, castration will still cure it.

This condition is found more especially in certain localities, as Switzerland, Upper Rhine district, and about Vienna. In these districts cretinism is not an uncommon disease. Of twenty-five cases treated by ovariotomy all resulted in cure.—*Therapeutic Gazette.*

REMOVAL OF INFECTED FIBROIDS AFTER LABOR.

Hirst (Annals of Gynæcology and Pediatrics, July, 1892). In the first case there were two fibroids of moderate size. They could not offer any mechanical obstruction to labor as they were attached near the fundus. After delivery the woman had symptoms of an infected endometrium, and vigorous measures were required to conquer the septic infection. The fever and signs of systemic infection abated, but there remained some persistent and continuous fever. After six weeks, the fibroids which had been diagnosticated during pregnancy. were removed with ease, and two days afterward the patient had her first normal temperature since.

In the other case the fibroid was very large reaching from the fundus of the involuted uterus to the anus. Immediately following labor sepsis was present. The operation was not difficult, though there were a good many adhesions to omentum which occasioned free hæmorrhage. Patient recovered perfectly.

He holds such fibroids should be operated on when they become infected, as the low vitality of their growths makes them particularly liable to septic infection.

THE TREATMENT OF THE MORE SEVERE FORMS OF VOMITING OF PREGNANCY.

Routh (Der Frauenarzt, March. 1892), states that in seven years' practice he has always been able to arrest the vomiting of pregnancy by brushing the cervix and lower cervical canal with a mixture of equal parts of iodine, iodide of potassium, spirits of wine and water. In general, vomiting ceases immediately after the application. If the vomiting should recur, the cervix should again be brushed. Generally after this the vomiting will be permanently relieved.

SURF BATHING FOR WOMEN.

(Editorial N. Y. Journal Gynæcology, August, 1892.) After alluding to the wretched accommodations afforded surf-bathers, the need of proper attendants, special emphasis is given to the avoidance of over-exertion, and the necessity of prolonged rest after leaving the water. The beneficial influence of sunlight in this connection is regarded as important, and when properly used causes increase of appetite and vigor. Cases of amenorrhœa are often improved by residence at seashore and sea baths.

In pelvic inflammation the patient should never bathe without the supervision of her physician. Excessive flow with uterine fibroids seem to be a contra-indication.

In the treatment of gynæcological cases it is urged that the following conditions are essential:

1. The supervision of a competent medical man.
2. A comfortable dressing-room, drying-room, and lounging-

room, in other words a proper bathing pavillion which should have a covered way to the water.

3. Competent attendants and enough of them.

4. Definite length of bath and a long rest after the bath before dressing.

5. Clothing which allows free movements of the body; this does not preclude an easy corset-waist for the very stout.

6. Complete submersion of the person.

APHTHÆ VULVARIS.

Giulini communicates to the "Centralblatt für Gynäcologie" an interesting case of aphthæ of the vulva. The patient was twenty-four years of age and between the second and third months of pregnancy. Two months before the beginning of her illness one of her children had thrush of the mouth. The patient was suddenly attacked with burning and itching of the vulva, which grew into intense pain. There was swelling of the labia majora and minora; the mucous membrane of the latter was very much reddened and covered with white, insular spots, which were easily removable with cotton, exposing very superficial solutions of continuity in the epithelial layer. There was a yellow, somewhat thick discharge from the vagina.

Despite the application of a two per cent. sulphate of zinc carbolated solution, the vulva and part of the vagina on the following day were entirely covered with thick, felt-like masses in membranous layers. There was considerable fever, swelling of the vulva, and burning on urination.

The layers, upon being examined microscopically, proved to be aphthæ.

Cloths soaked in acetate of lead solution and vaginal injections of carbolated lime water were followed by improvement in the swelling and reduction of the fungous patches.

Doubtless the membranes relaxed by pregnancy gave a favorable soil for the development of aphtha.

PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

Pathologist and Assistant Visiting Physician to St. Peter's Hospital.

STATUS EPILEPTICUS.

Trowbridge and Mayberry (Chicago Med. Jour.) give an analysis of the above condition. It is present in certain cases of epilepsy, but is not a constant phenomenon in every case. It is considered by these authors as one of the most grave manifestations of the disease. The condition is one cause of the great mortality among epileptics. The status epilepticus may be regarded as a "climax." An epileptic is subject to convulsions; the seizures become more and more severe, and the status makes its appearance as a condition caused by a concentrated, rapid and steady discharge of nerve force from the brain cortex, after which comes a period of stupor or excitement. The latter condition is the more rare. The investigation of this subject has been on cases of epilepsy in which there was a well-marked status. These cases have been twenty in number. Four post-mortem examinations were made.

The clinical history, notes of autopsies, prognosis and treatment enter into the discussion. A case presents a series of succeeding changes. Convulsions of a severe type follow in rapid succession. The interval between each is short; the patient is depressed during this time. The vessels in the neck throb; the face is congested; pulse is both weak and irregular; the temperature may reach 104° to 107°. The highest temperature is on the side most affected. The stupor that has existed between the paroxysms becomes greater; the pupils become dilated symmetrically; skin feels hot; evacuations of bladder and bowels may occur. The stage may last from one to several hours. There is one case mentioned in the paper where a hospital patient had 1,849 convulsive seizures during fifteen days. Death may occur at this point, or the patient may pass into the stage of stupor. The temperature falls somewhat, and the patient's general condition is one of depression. Dysphagia is present. Several days may mark the duration of this stage.

The post-mortem examinations are important in their macroscopical findings, showing an asymmetrical condition and an inequality in the weight of the hemispheres; decortication; engorgement of the cerebrum; well-marked puncta vasculosa; serous effusion into the ventricles and arachnoid space.

The prognosis is bad. Over fifty per cent. die; asthenia, serous effusion, or cerebral hæmorrhage may cause death. In treating the condition the authors have endeavored to terminate the attack and sustain the patient during the period of excitement or stupor. Chloroform and ether have merely terminated the attack for a time, without stopping it completely. When the anæsthesia passed away the patient again became convulsive. The point is made, however, that quiet may be obtained by the anæsthetic and some other drug may then be given. Chloral has been given by the rectum (the patient under the anæsthetic), grains xxx., repeated in one hour. Bromide has not given a good result. This has been more marked when the status followed a bromide course. Nitrite of amyl, morphia, atropia, hyoscine, conium were all used.

[Note.—In the out-patient department at St. Bartholomew's Hospital, in London, in the medical clinic of Dr. Norman Moore, the writer saw many cases of epilepsy several years ago. These patients were first examined by the clinical clerks, selected ones were used for general discussion before the entire class. After the diagnosis of epilepsy had been made, the question would be asked: Why do you think this patient has epilepsy? Dr. Moore laid great stress upon three facts, the presence of which gave conclusive evidence that the patient had epilepsy. These are *fits; a longer or shorter period of unconsciousness; injuries to the tongue or other parts of the body.* During a fit some injury may be received. The next question asked was: At what age did the fits begin? It was not uncommon for the attack to commence from twelve to seventeen years. Sometimes it was later. No case was seen personally in which the disease commenced after twenty years of age. One woman came with an attack. She had had epilepsy previously, and had been cured. Mental distress, long-continued, had brought on the disease again.

Then questions will be put as to the *frequency.* This had an important bearing upon the general considerations of the case. After ascertaining these facts, the question of cause would be fully considered. Dr. Moore laid great stress upon epilepsy in the family, direct and collateral, for one or two generations. Sometimes no family history could be obtained. It was noticeable, however, in very many cases in which heredity was a factor that a brother or sister of the patient had fits. In some cases other members of the family were afflicted with some nervous disease other than epilepsy. If no family history could be found, the existence of some injury would be sought for. A blow upon the head was very common. *No cases are now remembered where fright,* *venereal excess, or masturbation could be put down as causes.* Phthisis, if present in many of the family, would be regarded as having an important bearing, but an isolated case of phthisis would not be considered as an ætiological factor. Various nervous disorders in the family were regarded as exciting causes.

In such cases epilepsy would be regarded as merely one way in which the neurotic element manifested itself, standing in relation to general family disturbance, as where one member suffered from chorea, another from hysteria, and another from epilepsy. An injury to peripheral nerves, as some weight falling on the foot, or perhaps an amputation, would be considered as a cause of "Jacksonian epilepsy."

The prognosis depended upon age, time of first fit, present frequency, past frequency, influence of drugs, mental state and physical state. The face was a somewhat important factor, for if the patient were intensely anæmic, or looked as if the nervous system were being shattered, it made the prognosis more grave. No difference was made in prognosis as regards sex. The majority of the patients were women. In new cases the bromides were always first tried, generally the potassium salt. If depression followed, the dose was reduced or the drug stopped for a time; if the rash made its appearance, arsenic was also given. Next to the bromides came belladonna, the zinc salts, and nitrate of silver.—H. C.]

NEW BOOKS AND BOOK NOTICES.

All books received by the* JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.

TREATISE ON THE DISEASES OF WOMEN FOR THE USE OF STUDENTS AND PRACTITIONERS. By Alexander J. C. Skene, M.D. Second edition. pp. 968. New York, 1892: D. Appleton & Co.

The rapid exhaustion of the first edition of this work and the demand for a second, are sufficient evidence that it has been acceptable to the profession. That it is adapted to the wants of the student would seem to be greatly evident from the fact that it has been adopted as a text-book in many of the colleges of the country.

The second edition is not only a revision of the first, but it contains much matter which is entirely new, as for instance, entire chapters on ectopic gestation, diseases and injuries of the ureters, and vesical hernia and its treatment. Prof. Skene has also given in this edition his latest views on the subjects of laparotomy, ovaritis and injuries of the cervix uteri and pelvic floor. The illustrations which were so prominent and excellent a feature of the first edition have been improved in some particulars. We know of no text-book in which the drawings are truer to life than in this, a fact which is readily explained when it is remembered that the skill of the artist and the knowledge of the anatomist are combined in Dr. R. L. Dickinson from whose hand most of the original cuts have come.

SURGICAL DISEASES OF THE OVARIES AND FALLOPIAN TUBES, INCLUDING TUBAL PREGNANCY. By J. Bland Sutton, F.R.C.S., Assistant Surgeon to the Middlesex Hospital, London; late Hunterian Professor, Royal College of Surgeons, of England. In one 12mo. volume of 500 pages, with 119 engravings and five colored plates. Cloth, $3.00. Philadelphia, 1892: Lea Brothers & Co.

This is one of the most original and interesting works which have appeared on the subject of which it treats. It is as full of valuable material "as an egg is of meat," and to point out its excellencies would be to reproduce most of its 500 pages. The discussion of menstruation and ovulation, which are incidentally treated, is very practical, and the views of the author seem incontrovertible. Equally concise and yet thorough is the handling of tubal pregnancy, in regard to which the author says: "The time is not far distant when teachers of midwifery will wonder how they could ever have believed that an impregnated ovum would grow upon the peritonæum." Taken as a whole this book bears on its face the evidence that its author had something to say to his professional brethren which was the result of his own keen observation and experience; that he has said it well all will agree when they read the book.

PYE'S SURGICAL HANIDCRAFT. A Manual of Surgical Manipulations, Minor Surgery, and other matters connected with the work of House Surgeons and Surgical Dressers. First American from the Third London Edition. Revised and Edited by T. H. R. Crowle, F.R.C.S.

The work before us certainly fills a long felt want in surgical literature and practice. In it the author has striven to describe the details of the manipulative portion or art of our profession which, side by side with the scientific portion, renders trite and true the well-known aphorism, which declares that the best surgeon is an educated physician with a trained hand, for although, without doubt, surgery is in accordance with the tendency to recognize in its scientific growth and progress, higher aims than those concerned in mere manipulative skill, and because of this the latter may be more or less overshadowed, yet it is, nevertheless, true that the most expert handicraftsmen in our ranks are generally the most successful surgeons; and he who would win his way to the front will make no mistake if he cultivates that manual skill which will stamp him as painstaking and careful, rather than awkward and careless, in addition to forming habits of observation and the practice of drawing inferences therefrom.

The class of men to whom this volume will be particularly welcome comprise the internes upon the surgical divisions of our hospitals. These men are, so to speak, apprenticed to skilled labor, in which excellence can only be attained by the acquisition of manual skill, the result of practice. But it is first necessary to know how others do it; the way once pointed out, however, the rest depends upon the individual and his adaptability to the work. While it is true that some persons are born with their "fingers all thumbs," while others come into the world far too light-fingered, yet patience and training, with helpful hints from the masters in the art, will go a long way toward attaining the object in view.

Although Mr. Pye has striven hard to confine the work strictly to the lines expressed in the title, yet it has been almost impossible for him to do so. A fair exposition of abstract surgical questions at times is necessary in order to explain better, necessary manipulations. Barring the necessity for employing rather fine type, closely printed pages and small wood-cuts, in order to avoid increasing the size of the book beyond its present very convenient dimensions, the value of the work is not lessened, but rather enhanced by this treatment of matters which, at first glance, would seem to find a more fitting place in elementary works upon theoretical surgery.

The chapter on antiseptic dressing was re-written for the second London edition. It is very much to be regretted that Mr. Crowle, the editor of the present edition, did not decide to again re-write this section rather than introduce a brief prefatory note. The observations upon asepsis contained in the latter will carry but inconsiderable weight, when the elaborate description of the unnecessarily cumbersome, complicated and withal occasionally objectionable typical Listerian dressing, described in the pages which follow, is read. To teach that, in order to prevent the conveying of infection by instruments, it is only necessary to place the latter in a 1-20 solution of carbolic acid; and that wounds are to be dressed with the carbolic acid and resin gauze so popular more than a decade since, is to ignore the fact that heat, and heat alone, is the only reliable agent to be employed for the proper sterilization of surgical instruments and dressings, and that infectious agents may be carried to a wound within the folds of the very gauze upon which so much care has been spent in incorporating antiseptic agents within its meshes.

The work, taken all in all, is one of the best of its kind and is to be cordially commended to the profession.

GEO. RYERSON FOWLER.

DISEASES OF THE URINARY APPARATUS: PHLEGMASIC AFFECTIONS. By John W. S. Gouley, M.D., Surgeon to Bellevue Hospital. New York, 1892: D. Appleton & Co.

As the title indicates, this work deals chiefly with the inflammatory affections of the urinary organs. After an introduction giving some interesting historical facts, the author speaks of the "Composition, Innervation, Nutrition and Function of the Urinary Apparatus."

The author next takes up the subject of general pathology. The term super-acute as applied to inflammatory processes seems unnecessary. He shows here, and indeed throughout the book, such a marked preference for words rarely used that it is not to be commended. To say that an organ is enlarged seems preferable to the term "Auxesis," and so with regard to the employment of the words echmasis, ectasis, aschet-uresis, aconuresis, sychnuresis, etc., few men caring to burden their minds with such terms, when there are words in every-day use that convey the same meaning.

In the following chapter we have a clear and concise "Summary of the Ætiology, Semeiology, Diagnosis, Prognosis, Prophylaxis and General Therapeutics of Diseases of the Urinary Apparatus." Especially worthy of a careful perusal are the remarks on disordered urination and general therapeusis.

Chapter IV. is devoted to the subjects of interstitial nephritis, pyelonephritis and perinephritis. Then follows cystitis, which according to the cause he arranges under the four following heads: 1. Cystitis arising from Deviations in Quantity or Quality of the Urinary Secretion. 2. From the Extension of Phlegmasic Action of Neighboring Organs. 3. From Injuries of the Bladder and from Other Local Irritants. 4. From Stagnation and Fermentation of Urine due to Obstructed Urination. In the treatment of cystitis the author makes no mention of the oil of sandal-wood, which experience has taught so many to be more useful in some cases than any of the remedies suggested.

The value of gradual hydraulic dilatation in cases of contractured bladder is emphasized, and directions given for its employment. No reference is made to cocaine which renders the operation less painful and, in some cases, more effective if used with due care.

His remarks on the use of nitrate of silver, and his condemnation of the strong injections which have so often been advocated are pertinent, and should be read by every physician who resorts to this remedy in the treatment of vesical inflammations. His statement that cystotomy has failed to effect a permanent cure in chronic cystitis when such inflammation is associated with a contractured bladder, no tumor, calculus or foreign body being present, will probably be found to accord with the experience of a majority of surgeons who have carefully followed up their cases for a sufficient time after operation. In prostatitis, where an anodyne is required, morphine, hypodermically or by the mouth, is advised. Morphine and belladonna by rectal suppository is more than merely palliative in these cases, and is a preferable mode of administration.

The author does not accept the modern doctrine that the gonococcus is the exciting cause of specific or, as he terms it, virulent urethritis. The statement that chronic urethritis is not contagious will hardly be credited by those who have seen numerous instances of undoubted infection from such cases.

The causes of simple urethritis are given at length, and the chapter on its treatment is replete with sound advice.

Many will question his statement in reference to gonorrhœal rheumatism, that "its treatment differs little, if at all from that of acute or subacute rheumatism." The generally received opinion among specialists being that the remedies ordinarily effective in simple rheumatism are not so in the gonorrhœal form.

The book closes with an addendum on "Retention of Urine from Prostatic Observation in Elderly Men ; Its Nature, Diagnosis and Management."

The work throughout abounds in practical suggestions which will make it valuable to the physician as well as to the surgeon.

H. W. Rand.

First Lines in Midwifery. By G. Ernest Herman, M.D., F.R.C.P. Philadelphia: Lea Bros. & Co.

This little volume of 191 pages was designed to serve as a guide to medical students and midwives in attendance on natural labor—several abnormalities of labor are included however. It is a well-written and eminently practical work.

A MANUAL OF PRACTICAL OBSTETRICS. By Edward P. Davis, A.M., M.D. Philadelphia, 1891: P. Blakiston, Son & Co.

This is a neatly printed and copiously illustrated volume of 298 pages. The aim of the author as stated in the preface is to present in a concise form the teachings of the best known writers on the subject. It is difficult to see wherein the book offers any material advantage to the student over the score or more of similar works that have preceded it. Moreover, its pages are occasionally marred by carelessly written statements, as in the following examples, which have been taken at random:

"No permanent improvement can be expected as this expedient will not exercise more than a temporary influence upon the patient."

"After labor the convulsions may continue although this is exceptional and not the rule."

"While toxæmia and eclampsia are well-recognized conditions, it has been customary to ascribe all eclampsia to kidney failure."

THE PRINCIPLES AND PRACTICE OF MEDICINE. By William Osler, M.D., F.R.C.P. (London), Prof. of Medicine at Johns Hopkins University and Physician to Johns Hopkins Hospital, Baltimore. New York, 1892: D. Appleton & Co.

It would seem probable, considered theoretically, that the medical work that would command the largest number of readers would be one relating to materia medica and therapeutics, for all medical men use drugs; even the most limited specialist must employ some remedial agents, and would need to consult some book as to their action. But yet if it be true, as has been so frequently stated, that the practice of medicine is still somewhat empirical, and especially as there is frequently need for much information in a single volume, then the work which would appeal most strongly to the profession would be one on the theory and practice of medicine. There is not a large number of such works in medical literature. Books may multiply many times; special subjects may be treated in single volumes, but the number of works on practice is small, except in libraries and in the catalogues which publishing houses issue. There is nothing surprising in this, for the making of such books is no easy task. Their composition is the result of years of labor. Their authors are usually hospital men of great experience, who have added to that experience a knowledge, more or less complete, of the literature of general medicine. There is no work that can be made as dignified and scholarly. There is none in which so much skill can be shown in the due and proper use of the work of others. These works have a lasting reputation. In the last few years the books on special subjects, more particularly those relating to certain branches of surgery, have greatly increased, yet they are but the labor which represents the idea of the passing hour. A little change and they are forgotten.

But the principles of the practice of medicine have the dignity of age. The man who to-day reads Hippocrates may find ideas and thoughts of the nineteenth century in the pages which so many years ago he wrote. The ideas of the present without those of the past are valueless. Every work on practice of the last fifty years contains reference to the labor of the master minds of the early part of the century, especially men of the London, Edinburgh, Dublin, Philadelphia, Boston and New York schools of medicine. Some of these, whose work fifty years ago was just commencing, are to-day living, and as great consultants are still teaching their students. What these older books tell us of the clinical history of disease applies to our cases now. It is only by making more prominent some single feature that we equal or add to their work.

In a volume before us which bears the imprint 1852, we read of the possible nervous cause of fever, a suggestion of work then commenced but not elaborated; again we read the sentence, "What else there may be cannot be told in the present state of our knowledge"—a hint of new ideas and discoveries yet to come. In this treatise, which is by a great American, long since dead, will be found 228 pages of a most able and scientific essay on general considerations, which contains much information. The more modern books have omitted some of these discussions, so important, so valuable, causing a weakening in the strength of all their articles, severing the old from the new. But we still believe, notwithstanding this, that every practice of medicine must be the connecting link between to-day and the time long past. In this spirit, therefore, we turn to Osler's "Practice of Medicine" to note its manner and matter.

On page 1 is found the first reference to the older writers, in mentioning the work of a noted Frenchman in connection with enteric fever. To this disease, through the volume, only one name is given, the old one of typhoid. The references which are made in the text to the writings of others are mainly in the discussions of ætiology, morbid anatomy and prognosis; symptoms, clinical history and treatment are written from the author's personal study of disease, quotations in these paragraphs not being frequent. One excellent feature, worthy to be particularly noted, is the *mention* (not long and tiresome histories) for the sake of illustration, of cases which have been under the author's care. This, taking the form of the ideal rather than the abstract, makes the reading more interesting, emphasizes the text and strengthens it both theoretically and practically.

Each article commences with a definition, which in the majority of instances is short and concise, but at other times has explanatory sentences which serve to lengthen without making more clear. After this comes, when possible, a historical note; then ætiology, morbid anatomy, symptoms, diagnosis, prognosis and treatment. Some of these headings are subdivided. Under ætiology, in many instances, will be found the words: "The specific germ. This special exciting cause is set down as the true ætiological factor in a large number of diseases. Typhus, scarlet fever, syphilis and variola are mentioned as being perhaps due to such a cause, but its true nature is not yet known." In connection with these matters comes a sentence: "Further observations are required before the question can be considered settled." This is different in mere words, but in reality of interpretation bears a striking resemblance to the sentence quoted from the work of forty years ago. It shows medical science in connection with certain matters, to be in exactly the same position, believing that something is that cannot be found. The puzzles of the older writer have long been solved, while the later one, with all the knowledge of the past, finds himself searching and waiting for an answer to other problems. It is not presumptuous to suppose that, when these are known, the author of some textbook forty years from now may still be using the same sentences. There could be no stronger proof that medicine advances and in its very advance discovers new work.

The articles on diseases of the respiratory and circulatory apparatus will be disappointing to the student of thoracic diseases, with the exception of those on pulmonary tuberculosis and pericarditis. No explanation is given of the method of making physical examinations. Many of the signs are not elaborated. The importance of the first methods in examining the heart are not emphasized. No mention is made of Dr. Leaming's work connected with pneumonia and pleurisy. The part of the book which is most elaborate is that devoted to the digestive system, under ten heads with many subdivisions. There are excellent rules given for the examination of the stomach and its contents. One concerning absorption is simple and practical. Chronic inflammation of the pancreas is said to be found in diabetes. This statement makes the nature of the disease still more obscure. One is very much surprised to find pharyngitis and tonsillitis considered under digestive diseases—a very poor place for both. Again it seems strange to read that the author does not believe that the rheumatic element exists in tonsillitis. Very often heart cases are met where acute tonsillitis has been directly related to the cardiac change.

These, however, are mere matters of detail. The work is too important to be judged by them. It must be considered as to the effect it will have on future text-books ; as to the place it will occupy in literature; as to the manner in which its various parts have been brought together. It cannot be denied that the style of the author is very fascinating. The language is simple. There is no excess of scientific nomenclature—perhaps scarcely enough. One reads not only for information on some particular case or disease, but also for the pleasure of the reading itself. The impression is received that the work has been written in a rapid manner. It will, for a time at least, doubtless be used as a text-book. It can remain, without harm to itself, in its present form for many years. It must add to the fame of its author. But yet through it all there seems something wanting. We doubt if the arrangement be for the best. This arrangement belongs to the new era in books on practice. It is true it has about it a certain marked vividness of every day experience, but still the stately and scholarly preludes of the older books are wanting. The work takes it for granted that too much is known by the reader. Much as to the manner of disease is wanting. It may be that the present age requires such methods in book making, but still we have a suspicion that some day there will be a return to the older method, for our books on practice are so important that nothing must be omitted. At the present time, even if the arrangement be not satisfactory, we can, at least, give praise to the parts devoted to clinical history and treatment, and apply to them a certain Latin phrase, which years ago became famous, when it was used by a noted man in a political sense. It can be made to apply to literary work as well: *Vestigia nulla retrorsum*, known to us to-day in the words, "No steps backward."

HENRY CONKLING.

A SYSTEM OF PRACTICAL THERAPEUTICS. Edited by H. A. Hare, M.D., Jefferson Medical College, assisted by W. Chrystie, M.D., University of Pennsylvania. Philadelphia, 1891 : Lea Brothers.

The "System of Therapeutics" is a pretentious work of two volumes to which, in addition to the assistant editor, forty-one writers have contributed, seven of whom are foreigners. There is no article from the pen of the editor himself. The first volume relates, in part, to therapeutic measures other than drugs proper. It is a somewhat unfortunate fact that nearly everything in this volume can be found elsewhere, *i.e.*, in the previously printed works of the various writers. There is practically nothing new in these 697 pages of printed matter. The same statement applies, in general, to the remainder of the work.

A part of the article on "Prescription Writing" is certainly in very bad taste. We cannot understand what right there is for the printing in *fac-simile* of physicians' prescriptions. These may have come to the author in the way of business, as he states that they are copies. They are given under the head of "Faults in Prescription Writing." In this article one may read how compounds should not be made. The author has printed exact copies of prescriptions made by medical men, giving the original penmanship and omitting nothing save the writer's name. This is a most grievous error. There are allusions in the text which further augment the sin committed. There is no law in actual existence or in abeyance, written or unwritten, by which such an act can be justified. The prescription which leaves the physician's hands is intended for the druggist alone. No good can come by commenting on its faults in any medical work. The perpetrator of such a deed as this has violated one of the first laws of medical etiquette.

From such an article it is a delight to turn to the able and interesting essay by Prof. Wood, which serves as an introduction. In this three methods of treatment are described, the discussion of the second ending with a statement to the effect, that no therapeutic law exists which makes symptoms always point to certain remedies, by which disease can be fought in ease and ignorance. The third method is called the *scientific*. This is ably treated. The conclusion however, is reached that to-day much of the higher therapeutics is a "mixture of science and empiricism."

The title selected for the work is an unfortunate one. Its size has been greatly augmented by many pages of matter not germane to the subject proper. The article on yellow fever has *four* pages before the subject of treatment is commenced, while *ten* pages are given to a long history of the recent work in the study of asthma. There are *eleven* pages given to general considerations in bronchitis and *only four-and-one-half pages to its treatment*. The work therefore becomes a mixture of the principles and practice of medicine.

On page 549, volume I., will be found the statement that diphtheria has a specific cause (the Klebs-Löffler bacillus). While this has appeared many times in monographs, the present work is one of the first medical volumes in which it has been printed.

The table of contents placed at the beginning of each volume is very misleading. Many important items have been omitted from the index.

In conclusion it may be said that there is no place in medical libraries for such pretentious works, which in reality contain so little that is new.

HENRY CONKLING.

BOTANY: A CONCISE MANUAL FOR STUDENTS OF MEDICINE AND SCIENCE.

By Alex. Johnstone, F.G.S., Lecturer on Botany, School of Medicine, Edinburgh. With 164 illustrations and a series of floral diagrams. Pp. 260. New York, 1891: D. Appleton & Co.

As this work is intended as an accompaniment to the courses of botany which are pursued in the various universities of the united kingdom, and as their courses are not familiar to us, it would be unjust to criticise it. We cannot, however, but feel that however valuable it may be to the students of those universities it can never in this country replace Gray's Botanical Textbooks.

As a product of the book-makers' art it leaves nothing to be desired, the illustrations, paper and type being of the best.

THE POCKET PHARMACY WITH THERAPEUTIC INDEX. By John Aulde, M.D. Pp. 204. New York, 1892: D. Appleton & Co.

This book is written to accompany a pocket-case in which twenty-four remedies are carried, the number and the variety being sufficient, the author claims, to meet emergencies and to supply the needs of the general practitioner, especially in the treatment of the diseases of children. These remedies are in the form of tablet-triturates and small pills or granules. For those who prefer solutions full instructions are also given. The remedies which have been selected are acetanilide with caffeine and sodium bicarbonate, aconite, and alterative pill of opium, ipecac and blue mass, arsenic sulphide, atropine sulphate, bryonia alba, calcium sulphide, the same combined with morphine and pilocarpine, calomel, camphor, cannabis indica, copper arseniate, gelsemium, ipecac, iron arseniate, mercury biniodide, morphine hydrochlorate, the same with tartar emetic, quinine hydrochlorate, rhus toxicodendron, strophanthus, strychnine arseniate, trinitrin and zinc sulpho-carbolate.

The pocket-case containing these medicaments is of a convenient size for the ordinary pocket. The drugs have been prepared under the personal direction of the author and are for sale by John Wyeth & Brother, Philadelphia.

The motive which lies behind this book and the pocket-case is one which deserves the highest commendation, and if with them physicians are able to meet the emergencies which they are liable at any moment to be called on to treat, Dr. Aulde has placed us all under a great debt of gratitude. If in addition to this we can prescribe for many of our patients without being compelled to send them to the drug store in the middle of the night or in inclement weather, the debt will be still greater.

One of the valuable features of the brochure is the "Therapeutic Index," which includes more than one thousand references and is arranged alphabetically. Under the various medicaments the diseases follow, and no difficulty is experienced in referring to the different remedies for any particular disease. The whole plan is a novel one, and we sincerely hope that enough physicians will place it on trial to determine whether it is practicable or not.

TREATMENT OF TYPHOID FEVER. By James Barr, M.D. Pp. 212. London, 1892: H. K. Lewis.

As a result of an experience in the treatment of fifty-five consecutive cases of typhoid fever with but one death, Dr. Barr offers to the profession with confidence, his method of treatment, which consists in immersing and keeping immersed for days in a tank of water such patients as a high temperature indicates would be benefited by such treatment. The tank is not a specific for typhoid fever, but it is a specific treatment for the patient; by placing him in an improved environment his system is better able to adapt itself to, and to overcome, the altered condition attendant in the fever. A detailed account of the treatment of the cases is given, one of whom remained in the tank for thirty-one days.

ESSENTIALS OF PHYSICS. By F. J. Brockway, M.D. With 155 illustrations. Pp. 330. Price, $1.00. Philadelphia, 1892: W. B. Saunders.

This volume, No 22 of Saunder's Question-Compounds, was written to prepare medical students for examination in physics, Ganot's being too large to be used as a text-book, and the elementary books not containing all that is demanded of students. The author states that he has made free use of the notes of the lectures delivered by Prof. Chandler at the N. Y. College of Physicians and Surgeons. The subject is treated in the form of question and answer, and seems admirably adapted to the purpose for which it was written.

CONSUMPTION: HOW TO PREVENT IT AND HOW TO LIVE WITH IT. By N. S. Davis, Jr., A.M., M.D. Pp. 143. Philadelphia and London, 1891: F. A. Davis.

The origin of this book is in the hygienic rules which its author laid down for the guidance of his consumptive patients, believing that the successful treatment of their disease required them to rigidly observe certain sanitary rules. He also holds that the disease can be reduced everywhere to very moderate limits if the bodies of children and growing youths were developed physically, and if the hygiene of homes, offices and factories were more perfect than it is.

Dr. Davis does not believe in either the necessity or advisability of isolating consumptives, and refers to the utter failure of this plan which was vigorously carried out in Portugal and Naples for more than fifty years. He regards the sputa as almost the only means of dissemination of the disease and advises means for its reception and destruction. The subjects of climate, exercise, clothing and food, as also the treatment of the disease are considered sufficiently and in a common-sense way. Taken as a whole it is the most practical book on the subject which we remember to have seen, and much good can be done in the limitation of the disease if the injunctions herein laid down are followed.

THE MEDITERRANEAN SHORES OF AMERICA: or, the Climatic, Physical and Meteorological Conditions of Southern California. By P. C. Remondino, M.D. Illustrated with 45 engravings and two double-page maps. Pp. 176. Extra cloth, price, $1.25, net; cheaper edition bound in paper, price, 75 cents, net. Philadelphia: The F. A. Davis Co.

A very valuable guide to both the physician and the traveler, its title telling in a concise way the interesting topics of which it treats.

A TEXT-BOOK OF NURSING. Compiled by Clara S. Weeks-Shaw. Second edition, revised and enlarged with illustrations. Pp. 391. New York, 1892: D. Appleton & Co.

The second edition of this well-known manual is an improvement upon the first, although that was undoubtedly one of the best in the language. While it is especially designed for nurses, physicians will find in it much that is of value to them, and even indispensable in communities where the luxury of the trained-nurse is unknown.

BACTERIAL DIAGNOSIS; TABULAR AIDS FOR USE IN PRACTICAL WORK.

By James Eisenberg, Ph.D., M.D., Vienna. Translated and augmented from the second German edition by Norval H. Pierce, M.D. Pp. 184. Price, $1.50. Philadelphia and London, 1892: The F. A. Davis Co.

It is the prevailing opinion among the uninstructed that bacteria are distinguished from one another by differences of form or structure. While this is to a certain extent true, still, as Koch long since pointed out, there are many forms which, morphologically, are almost indistinguishable, but which, in pure culture on potato or gelatin, or on inspissated blood-serum, differ essentially. This fact makes necessary a book in which the specific differences of bacteria shall be tabulated for ready reference. To meet this want the author has prepared the volume before us, arranging the tables in as concise a form as possible, so that the worker may inform himself as to the identity and significance of a given micro-organism.

The use of this book in the laboratory of Professor Cohn would seem to be sufficient guarantee of its worth.

A MANUAL OF DISEASES OF THE NERVOUS SYSTEM.

By W. R. Gowers, M.D., etc. Vol. I., Diseases of the Nerves and Spinal Cord; second edition. Pp. 616. Price, $3.50. Blakiston, Son & Co., 1892.

This is probably the best general work on its subject in our language. It is large enough to be comprehensive, is well up to date, and emanates from one of the best English-writing neurologists. This second edition is also an enlarged one and ought to represent the author's highest achievement. Besides this American reprint, this new issue is appearing in both German and Italian.

Having thus acknowledged its very high merits, it is perhaps in order to mention certain of its peculiarities and weak points.

A record of original investigation is of universal value, but any text-book, no matter how excellent, is always especially adapted to the land of its author. So here the insular experience of an Englishman cannot cover nor fully adjust itself to the varied racial, climatic and professional conditions of this country.

Each general section is introduced by an extensive consideration of the respective neuro-anatomy and physiology. With the various excellent special treatises in this field that are now available, it is certainly high time to exclude normal neurology from all works with this title.

The subject of treatment, as in most such treatises, is everywhere but briefly considered. While this may accord with the natural conditions in a matter that is still largely in the active clinical stage, yet it is sad to think that a better therapeutical showing cannot be made. Is the trade-unionism of specialists universal? However, what little is said on this matter represents the best teaching.

The 180 illustrations—though in themselves well chosen, and perhaps sufficiently numerous—present withal the pathological rather than the clinical side, and everywhere in this American reprint are sadly faded and unreal in appearance.

Authorities are not very freely quoted, as perhaps becomes a work for practitioners. Occasionally even an American is mentioned, yet in a labored way and not as though he deserved it. The fathers of American neurology are practically ignored.

A surprising share of the work—42 pages—is devoted to locomotor ataxy. Caisson disease is described as "Divers' Paralysis," no mention being made of the extensive experience on this side of the water. Apparently a fair amount of space is devoted to malarial neuritis, while in reality this is taken up almost wholly with beriberi. The final indexing is also very imperfect in many respects.

Possibly such criticisms only show that man is finite—even at his best.

WILLIAM BROWNING.

SURGICAL ANATOMY FOR STUDENTS. By A. Marmaduke Sheild, M.B., F.R.C.S. Pp. 226. New York, 1891 : D. Appleton & Co.

The author's experience as teacher of operative surgery at Charing Cross Hospital has been admirable training in the preparation for writing a book of this nature. No one, so well as a teacher, knows the wants of a student, and the best text-books come from the pens of those who in their practical dealings with learners know just what is needed and how to supply it. This volume bears on its every page evidence of the skill which comes only from daily contact between lecturer and listener. It is one of the most practical guides we have seen, and no surgeon can afford to be without it. A course of instruction based on it would cover every important point in surgical anatomy which an operator should know.

DISEASES OF THE NERVOUS SYSTEM. By J. A. Ormerod, M.D. Pp. 343. P. Blakiston, Son & Co., 1892.

This is in many respects an excellent little work, and arranged on a somewhat novel plan. Its title is, however, inaccurate, as a large part of the book is taken up with normal neurology and symptomatology. This may render it possible in the latter part to describe many nervous diseases in a much briefer space; but from our standpoint, so limited a work might far better be devoted to either one field or the other.

The illustrations (66) are largely anatomical. Perhaps the feature of the work is the description and interpretation of symptoms, and the ways of examining for them. However, even here, though reflex phenomena are considered, the theory of inhibition seems to be quite ignored and its facts to receive the scantiest attention; and the same holds for trophic functions. In considering the centres for vision, he gets somewhat mixed; whilst recognizing the fact of homonymous hemianopsia from unilateral occipital lesion, he still casts a longing look towards Ferrier's old view, and overlooks the distinction now drawn between coarse undifferentiated vision and definite memory-pictures. The statement that we do not know the position of the sensory tracts in the cord (p. 92) is misleading, as they have in part been traced. The view that the semicircular canals are for equilibrium (*i. e.*, are organs of special sense) is perhaps sufficiently justified for working purposes, yet it is not so fully established as his repeated use of it indicates.

Still, withal, the book is a very interesting one, and there are few who might not study it with advantage. It is also admirably suited to the undergraduate's needs. WILLIAM BROWNING.

CORRESPONDENCE.

EFFECT OF PRESIDENT HARRISON'S QUARANTINE PROCLAMATION.

To the Editors of THE BROOKLYN MEDICAL JOURNAL.

The largely attended special meeting of the Medical Society of the County of Kings on Tuesday evening to consider measures for the prevention, management and treatment of cholera, demonstrates the interest and temper of the medical profession of this city to deal wisely with such an epidemic, should it unfortunately pass quarantine, and also its willingness to coöperate with the municipal authorities in all sanitary matters related thereto.

So also the prompt delivery by post this morning of the special edition of THE BROOKLYN MEDICAL JOURNAL is a source of congratulation to its management. With a view of quieting undue public alarm—the injury of which, to the individual, the city and the country at large, cannot be estimated; it is to be hoped, that after proper sanitation, municipal, domiciliary and personal, the medical profession will, on all proper occasions, remind their patrons and the public of Dr. Sternberg's assertion that so long as the "comma bacillus" does not enter the alimentary canal an attack of cholera is impossible.

My purpose, however, in addressing you is principally to call attention to the words spoken at this special meeting and appearing in the special edition of THE BROOKLYN MEDICAL JOURNAL referred to, by my friend, Dr. Bell editor of the *Sanitarian,* which are as follows:

"The President's proclamation has done more harm" than any act I know of since we heard cholera had come to the port of New York. And it ought to alarm them; it is horrible to shut up in a ship for twenty days, or even one day, such immigrants as the doctor had described (referring to Russian Jews).

"The whole spirit of the proclamation" means, that a ship comes here with 1,000 people on board, and there may be one, or a dozen or a hundred cases of cholera on board, and they are going to be kept there until they die.

"Our business is to take the sick men out and disinfect the ship as soon as possible and give her to her owners."

This wholesale denunciation of patriotic federal aid, coming to supplement and assist the authorities of the Board of Health of my city as represented in the Health Officer of the Port, in the exercise of necessary powers which the State authorities did not possess and which they were unable to enforce should not pass unchallenged.

No one for a moment familiar with the history of such an epidemic, and the simplest rules of sanitation, but that will heartily approve the proposition to isolate the sick from the well, and removing them all from the infected ship, as soon as possible after reaching port. The assumption that the proclamation of the President intends or implies, that because it was needful to quarantine a ship for twenty days, it was necessary to keep its passengers and crew, therefore, twenty days or any other specified period of time, is not only unwarranted but an evident perversion of its meaning.

If such was its true import, then it was a violation of the President's proclamation to remove *any one from the ship* for a period of twenty days, a proposition too puerile for discussion.

True, the Officer of the Port did intimate, if the public press is to be credited, that he would ignore the President's proclamation, yet in calmer moments and in the exercise of a wiser judgment, he not only announces he will obey federal authority but also the suggestions of the Advisory Board of eminent physicians, appointed by the New York Chamber of Commerce—men whose advice may well be heeded, containing the names of those who had so recently retired as consultants to Board of Health of the City of New York for the reason, as stated by them that this same Board of Health was not governed in its administration by a proper regard of the public good.

Is any one prepared to affirm that the delay in the removal of the cabin passengers of the Normannia has been hindered for a moment by the interference of national with State affairs? What then is the effect of the President's proclamation? Two-fold. First it supplements the authority of the Port Officer—a matter over which the commonwealth of New York has no control, to practically stop immigration from infected ports, and teach steamship companies like the Hamburg-American that the people of this country are not to be trifled with; and second, it can and does aid the Officer of the Port in the proper discharge of his duties in offering to furnish land and supplies at Sandy Hook for the crew and steerage passengers of infected vessels and by aid in proper patrol of ships at quarantine and in other ways, and that too without violating the dignity or sovereignty of the State of New York.

Happily, under existing circumstances, there is no reason to hope for proper coöperation between State and federal authority, each supplementing the other in a way to render quarantine effective. The complication and difficulties growing out of a divided responsibility in this matter of quarantine, enforces the necessity that all powers related thereto should be vested in the United States authority having a uniform quarantine at all ports of entry and suitable means should be adopted to prevent entrance of an epidemic over any of our borders.

This will be best attained by a National Board of Health, constituted from the medical departments of the Army and Navy and from the Medical Profession, fully equipped with power and money to enforce its regulations.

Had this eminent sanitarian, given reason and judgment its proper sway in formulating its expression (and possibly indulging in his prejudices), at a critical time when coolness and moderation are needful, to calm an unduly disturbed public feeling, he might with excellent taste and without violence to the varieties of the situation have declared that the "President's proclamation" had done as much good as any act he had heard of since cholera reached the port of New York, for I am unwilling to believe that Dr. Bell, whose words and influence have been such valuable contributions to the science and art of practical sanitation, could deliberately oppose a method so essential to the safety of the community.

Respectfully Yours,
Walter B. Chase, M.D.

Brooklyn, Sept. 12, 1892.

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INJECTION OF SALINE SOLUTION INTO THE FEMORAL ARTERY; *A PROPOS* OF CHOLERA.

To the Editors of The Brooklyn Medical Journal:

I am in receipt of, and have read with exceeding interest, the special and timely edition of your valuable journal upon the subject of cholera. But I wish to enter a protest in your columns against the unfairness of a remark by Dr. Andrew Otterson, attacking myself—or more correctly, attacking an assertion which he alleges that I made, but which I did not make.

A propos of the treatment of cholera by transfusion, he says: "All the cases where transfusion was used were not saved, but many of them were. Dr. Dawbarn now recommends the plunging of the needle into the femoral artery with the saline solution, in such conditions. Well, I am not plunging any needle in the femoral artery."

If the doctor will take the trouble to read my article published in the "Medical Record" last winter, he will find that I made the following statement: "My reason in this case (a successful one of recovery from severe hæmorrhage, by using my method) for varying the technique while injecting the *second* pint—by using the subcutaneous cellular tissue of the thighs instead of the artery—was that I thought the circulation then sufficiently strong to absorb the solution into itself; and I did not wish to pierce the artery—needlessly. *It would seem that if a patient requiring transfusion was not in such extremely bad state as my case was at first, this latter method might do very well; but if a prompter and more certain effect be needed, I should always prefer entering the artery with the needle.*"

This language is, I hope, plain enough, to absolve me from an inferential charge of recklessness. In two later cases, in each of which the circulation was very bad when first I saw the patient, I have since used this arterial plan of saline infusion, and without cause for regret. These will be published in the "Medical Record" shortly.

It is evident from Dr. Otterson's final remark that he is not acquainted with the fact that at present the most successful method we have of treating aneurism of arteries larger than the femoral, even—for instance, those at the root of the neck—and inoperable by pressure or ligation, is that of McEwen of Glasgow, who inserts into the sac many needles, and causes thereby a deposit of fibrin, thickening the walls.

More than a year ago (as one example) Dr. Wyeth operated on a patient by this plan in the Polyclinic hospital, in my presence. He inserted into the diseased vessel *thirteen* needles; with one of which he lightly scratched the opposite wall of the sac. All were left in place *twelve hours*. Ten days later, thirteen needles were again inserted, and again left in twelve hours. The same treatment was repeated a third time, after another ten days' interval.

Dr. Wyeth reports the result, at the present date, as favorable. The sac is distinctly smaller.

If a diseased arterial wall will safely bear such needling as this for twelve hours, and repeatedly, it would seem a fair inference that a sound artery may without serious hurt bear a single needle for a single half hour. And such has been my experience, thus far.

When saline infusion is needed (and *blood*-transfusion, as we all know, has now been dropped by almost all workers) very few general practitioners feel like using the knife and searching with it for that collapsed vein in the arm. Then, too, they are apt not to have the necessary cannula to tie in. If, now, a much simpler and more ready plan can be adopted, involving no cutting and no cannula, the practitioner aforesaid will naturally turn toward it—always excepting Dr. Otterson, who evidently still approves (or at least mentions no disapproval) of the use of blood, and of the antiquated apparatus of the days of 1854.

The practitioner aforesaid will now, in his case of cholera or of exhaustion following hæmorrhage, attach an aspirating needle to his fountain syringe—or his Davidson syringe, if preferred—and proceed to inject here and there, into the subcutaneous cellular tissues, water, which has first been boiled for reasons of asepsis, cooled until the (cleansed) hand can just barely be borne in it, and in which a heaped teaspoonful of table-salt to the quart has been dissolved. About three or four ounces in one spot is enough; and this is gently but firmly to be rubbed until diffused, with the vaselined hand. The unusual degree of heat of the solution mentioned (about 120°F.) I have shown in the article aforesaid, in the "Record," to be a visable as a stimulant to the heart and vessels, and devoid of all ill-effect. About 40°F. *hotter* than the hand can bear would cause coagulation of albuminoid tissue, but nothing less than that would do this. As hot as the hand can bear is both absolutely safe and wise.

The ordinary mistake, at this point, is to throw in altogether *too little* of the salt-water. One to two quarts, in the average adult, *at least*, should be used. Any excess over whatever amount the thickened blood of cholera, or empty vessels of hæmorrhage, may need, simply remains in the cellular spaces until gradually absorbed and does no harm. Almost always the doctor stops too soon, throwing in no more than the estimated amount of blood lost; and forgetting that because of shock the vessels have lost their "tone," are almost completely dilated, and the brain and heart are made doubly anæmic thereby.

If however, the doctor thinks, when first he is called to the case, that the patient is almost moribund, and that very likely the failing circulation would leave the salt-water still in the tissues where the syringe places it, instead of absorbing it into the blood-vessels—*then* is the time to use, and use promptly, my plan of arterial saline infusion, (unless he prefers to use the knife, find a collapsed vein and tie in a cannula).

As before, he prepares solution, syringe and a very small aspirating needle, or preferably a coarse hypodermatic-needle. An ordinary hypodermatic needle will do on a pinch, but it requires much muscle and patience to force so slender a stream into the vessel by the Davidson syringe, or else a very unusually high elevation of the fountain-syringe. Still, I have used it (the small hypodermatic needle) successfully, and reported the case. The practitioner now feels just below the middle of Poupart's ligament for the femoral artery, here large enough in calibre to carry a lead-pencil. If the heart is still beating, this pulse can almost always be felt. The aspirating-needle is now forced gently and directly into the artery, not with a sudden plunge but by a slow, rotary movement. As soon as the point is within the lumen, bright red blood will fill the needle; whereupon it is held very firmly in place while an assistant connects the base of the needle with the syringe already filled with hot salt-water, and ties it in place with a thread, to prevent leakage.

The solution is now thrown into the arterial current steadily and slowly, taking about one-half hour for a pint. If a Davidson syringe be used (which I prefer) the bowl containing the solution should be placed in a larger one, holding much hotter water. In this wise, by adding from time to time to the heat of the outer bowl or pan, the solution in the inner vessel may easily be kept as hot as the hand can bear.

If the Davidson syringe leaks, then, to avoid pumping air, it should be held, with the hand manipulating its bulb, below the water.

As soon as the circulation seems improved somewhat, the subcutaneous method of infusion should supplant the arterial.

I have gone into these details more fully than a mere reply to Dr. Otterson would necessitate because of the timeliness of the subject. No reader of this can be sure that he may not have occasion—if not this year, very possibly next—to apply such methods in cases of cholera. And post-partum hæmorrhage we may meet at any moment. Very respectfully,

Robert H. M. Dawbarn.

105 West 74th Street, New York.

MISCELLANEOUS.

CHOLERA ASIATICA AND CHOLERA NOSTRAS; THEIR DIAGNOSIS AND TREATMENT, WITH SPECIAL REFERENCE TO THE BACILLUS.

BY ARNOLD STUB, M.D.,

Brooklyn.

Read before the Medical Society of the County of Kings, May 19, 1885

[Reprint from *N. Y. Medical Journal*, July 11 and 25, 1885]

Mr. President and Members of the Kings County Medical Society: At a meeting of the Royal Medical and Chirurgical Society, of London, March 31, 1885, Sir Guyer Hunter made the remark that he had not been able to find a difference between cholera asiatica and cholera nostras. Upon reading this remark, I remembered a case which occurred in my own practice, and whose history tends to support the opinion of the English physician. Permit me to relate the case:

Monday, July 26, 1881, a prominent gentleman, closely connected with one of the transatlantic steamship companies, was taken with a light diarrhœa, which continued Tuesday and Wednesday; a few dark-colored, painless stools and a feeling of being tired were not sufficient to make him call for medical aid, and he contented himself with taking a few drops of essence of ginger and some of the so-called "Sun" cholera mixture, which, however, did not relieve the disorder. After midnight, during the night from the 28th to the 29th, his diarrhœa increased, vomiting commenced, spasmodic contractions of the muscles of the calves of his legs and severe griping pains created considerable suffering, and I was sent for.

I found the gentleman very much prostrated. Constant vomiting of a greenish fluid, profuse odorless alvine discharges of rice-water appearance, a cold skin, an anxious countenance, cold tongue, constant spasms of the muscles of the lower extremities, and extreme prostration marked the case. I ordered at once sinapisms to various parts of the body, alternately applied, and brushing of the skin with diluted alcohol. Internally I prescribed a mixture consisting of

Ol. cajeputi, Ol. cinnamomi, Ol. menth. pip.,	aa gtt. xii;
Sp. vini gallici	℥ j;
Mist. potass. citrat.	usque ad. ℥ vj;

M. S. One tablespoonful every half hour until vomiting ceases.

I also ordered

Mass. hydrarg	gr. xx;
Pulv. opii	gr. viij.

M. ft. massa; in pil. No. 8 divid. S. One pill every two hours.

Ice in small pieces to relieve thirst, hot flat irons to the soles of the feet, and heated flannels to the abdomen, in numberless other cases, had not failed to give the desired relief, and when I called again, a few hours afterward, I expected to find a change for the better. However, I was sadly disappointed, and the patient remained in the same condition until next day.

On the morning of the 30th, I found all the symptoms increased —the vomiting and purging were almost constant, the skin was cold and clammy, and the hands had the characteristic appearance of those of a washerwoman. If I lifted a fold of the skin from any part of the body, it remained standing in the same position for some time. The eyes were sunken, and the nose looked pinched. The whole face had an anxious and dusky look, the tongue was as if paralyzed, the voice was almost inaudible, the lips were blue, and the radial pulse could not be felt. The vomited matter as well as the rice-water discharges was strongly alkaline, and changed litmus-paper from red to blue. The urine was suppressed. I ordered at once a hot bath, and continued treatment; also ordered bags filled with hot bran to the lumbar region. To allay the excessive thirst, I ordered the ice to be continued. I also prescribed iced champagne and brandy.

August 1st, the patient became still lower. The tongue and skin were of a reptile-like coldness. A few drops of urine, drawn with a catheter, coagulated immediately upon being heated in a test-tube. Ordered one ounce of Tokay wine hourly per rectum, because champagne or brandy was not retained by the stomach. Directed another hot bath to be given, and called Dr. Hesse, formerly of this city, in consultation.

We both came to the conclusion to try musk and camphor, āā gr. ij, every two hours; ordered oatmeal gruel and Tokay wine per rectum every two hours; repeated the bath in a few hours; and continued the friction of the skin. Hot bran bags were constantly applied to the lumbar region.

The first of the powders the patient vomited at once; the second, given immediately afterward, he retained. Sometimes his stomach rejected the champagne, when we alternated the latter with iced brandy.

The following day we added strong black coffee to the stimulants prescribed, and continued this treatment until the eighth day of his illness, when his skin gradually became of natural warmth, his pulse noticeably of greater volume, his stomach less irritable, his mind less confused, and his speech more audible.

During this time he had taken every twenty-four hours one bottle of Tokay wine, with oatmeal gruel, per rectum; one bottle of champagne and a considerable quantity of brandy by the mouth. The urine was entirely suppressed for three days, when it returned, and became gradually less albuminous.

After the eighth day we commenced to feed with clam-broth, beef tea, etc., and continued champagne and brandy according to circumstances. Prostration still remained.

About the ninth day well-marked typhoid symptoms developed, with a range of temperature of 102° in the morning and 104° in the evening.

At the end of the second week he complained of an intolerable itching, particularly in the face, and, in spite of all efforts to prevent him, he would scratch until the blood trickled down his face. I may remark here that no opiates had been given him for over a week. During the whole time he had been kept in a horizontal position, and even a change of garments was effected in that position. The itching lasted for about twenty-four hours, when all at once a furunculosis commenced, particularly attacking the face. Some of the boils were very tardy in healing, and had an almost gangrenous appearance in the center. The whole illness lasted five weeks, when I considered the gentleman sufficiently strong to be removed to the Catskills.

Dr. Hesse, as well as myself, came to the conclusion that this was a case identical with Asiatic cholera, although we did not feel ourselves justified in calling it by that name, because no other case of such a nature had appeared in the city. We were at a loss to find symptoms for a differential diagnosis between cholera nostras and cholera asiatica, except from the circumstance that no epidemic cholera existed in this country or in Europe.

I may add that from the time I made my first call I ordered disinfectants in the form of chloride of lime and carbolic acid to be used in the sick-room as well as all over the house, and restricted the attendance upon the patient to as few persons as possible, who avoided intercourse with the rest of the family.

During the year 1868 or 1869 I was called upon to see a case of sporadic cholera in consultation with the late Dr. Barthelmess. The patient lived in Boerum Place. When I saw him the disease was in the algid stage, and all I am able to remember about it is, that he died the same day, which was the third day of his illness.

During the summer of 1866 I had spent a whole night at a boarding-house in Flatbush, whose inmates had been taken down with cholera asiatica Myself and the husband of one of the victims were the only persons who left the house alive next morning.

I was called upon to attend the wife of this gentleman, and found a whole house full of dead and dying without a single attendant. If Dr. Conkling, who was health officer at that time, happens to be present, he will perhaps be able to refresh my memory by telling us how many people died in that house that night.

Gentlemen, I have a very vivid recollection of that terrible night and of those cases, and I assure you that I am not able to draw a line of distinction between the cases seen in 1866 at Flatbush, in the boarding-house kept by the keeper of the Penitentiary, from whence the disease had been communicated to the inmates of the boarding-house, and those cases of sporadic cholera which I have seen since, in 1868 or 1869, and in 1881.

The question naturally presents itself to my mind, are the views of Sir Guyer Hunter correct, and is there actually no line of distinction between cholera nostras and cholera asiatica, when the first case or cases of the latter appear in a community like ours? I must answer this question in the negative as long as we take the complex of symptoms into consideration only.

But, gentlemen, within the last year or two investigations have been made into the ætiology of Asiatic cholera which bring us a step farther toward distinguishing between the two diseases above mentioned.

When I first became acquainted with the labors of Dr. Koch, and read of his discovery of the comma bacillus, I was enthusiastic in the belief that at last we had found the real cause of Asiatic cholera, and, by a simple microscopical investigation, would be able to diagnosticate cholera asiatica from cholera nostras.

But, gentlemen, here I was doomed to be disappointed. Then, immediately afterward, Dr. Prior and Dr. Finkler published the result of their investigations, and proved, or at least attempted to prove, that the comma bacillus might also be found in cholera nostras.

Dr. Deneke found the curved bacillus in old cheese, Dr. Lewis found it in sputa, and last, but by no means least, Emmerich declared that the comma bacillus was not the cause of cholera, but that a bacterium, discovered by him in Naples, alone was the whole source of the disorder.

After I became acquainted with the foregoing statements I immediately began to investigate, and spoiled about a large boxful of covering glasses in the attempt to find the comma bacillus in sputa, in old cheese, in the discharges of cholera nostras, in chicken cholera, and in the discharges of typhoid fever patients.

I certainly did find curved bacilli in every one of the specimens, but I did not find the characteristic spirillum which I found in the preparations sent me by Dr. Nicati, of Marseilles, and those I received afterward through Mr. Emmerich and Mr. McAllister, of New York, procured from microscopical laboratories in Berlin and Brussels, and representing comma bacilli artificially cultivated.

Although the curved bacilli found in cholera nostras and in old cheese are also spirilla, they are of a different size and have less of the corkscrew shape than the comma bacilli. After the former have been prepared for the cover glass and put in balsam for examination, they assume partly the form of the cholera bacillus; but even in this condition they are larger than the latter. But if a suspended drop from the rice-water stools of a cholera-nostras patient and one from the stools of a patient suffering from Asiatic cholera are examined alongside of each other, a difference in the size and shape of the spirilla will become easily apparent. The spirillum of Asiatic cholera is only to be mistaken for that of recurrent fever, and Koch himself declares that he could not distinguish one species from the other if placed alongside of each other.

Gentlemen, I believe that Koch is correct in reference to his views of the ætiology of cholera and in regard to the bacillus question. And the reason why I think so I shall state later on.

Starting from this base, let me suppose that the cholera raging in Spain at the present time assumes wider proportions; it spreads again in France; it reaches Germany and invades England. Steamers bring us within ten or twelve days in direct communication with ports which may be visited by cholera patients at any time. One of the latter may get on board of the steamer; he may be well at the time he enters the steamer; he may be taken with the diarrhœa during the time he is on board. According to authors, the time of incubation may vary from one to fourteen days, and, if this is correct, a man may travel from Marseilles to Liverpool or London, and from London to New York, without having the slightest symptoms of cholera before he lands here, or he may have diarrhœa which may pass unnoticed by him and others; but this man, although he may never himself develop the second stage of cholera, may deposit upon the steamer, or perhaps afterward in this city, the germ which will, in a few days, infect the whole city with the pestilence, and we may never find out where it came from.

Now, gentlemen, let me suppose that such conditions prevail this coming summer; we have learned that the cholera is in France, perhaps in Germany, but not in England. The English steamers, consequently, are not subjected to quarantine. All rags have been carefully excluded from landing upon these shores, although I never heard that rags had carried the disease, provided they were not wet, and I am called, perhaps after midnight—which, by the way, seems to be the time such cases first become most troublesome—to see a patient who suffers from symptoms of cholera. The question naturally arises, have I to deal with a case of cholera morbus or cholera asiatica? The question is an important one. Shall I notify the Board of Health, and perhaps unnecessarily alarm the community? Shall I isolate the patient, or shall I let matters go on, wait for developments, and jeopardize the lives of other people? In order to come to a proper diagnosis of the case, I proceed at once to look for the cholera bacillus in the rice-water discharges. In three different ways this object may be attained. I take two covering glasses, clean them well, after the most improved method, in nitric acid, wash them in alcohol and in ether, and afterward in distilled water.

As soon as they are dry I place a drop of the rice-water discharges upon one of those glasses with a spatula, previously sterilized by heating it over an alcohol-flame or a Bunsen burner, and spread the drop of the rice-water discharge carefully out upon the covering glass. I place the second glass upon the first and draw them asunder, in order to cause an even and uniform spread of the material upon both glasses.

As soon as they are completely dried, which will be in a few minutes, I draw them slowly three times through the flame of an alcohol-lamp, holding them with a pair of forceps covered side upward. Then I take them home and heat in a test-tube a small portion of a watery solution of gentian violet or fuchsin. As soon as the fluid begins to smoke, I pour some of it into a watch-glass, and, taking the covering glasses between two fingers, I let them drop upon the fluid with the side containing the suspected material downward, I let them swim for about ten minutes, take them from the fluid, wash them in sixty per cent. alcohol for about two minutes, remove the water by dipping them for a few seconds into absolute alcohol, wait a few minutes longer until they are dry, and then examine them under the microscope with a power of $\frac{1}{15}$ water immersion, or, better still, with $\frac{1}{12}$ oil immersion, and expect, of course, to be able to diagnosticate, from what I see, true Asiatic cholera or cholera morbus.

But, gentlemen, although the method above described is exactly the one used by Koch to bring the comma bacilli into view, if the material is taken directly from the patient, or if taken from an artificial cultivation, I may be sadly disappointed in all probability, because, in the first place, I may find no characteristic spirilla, and those bacilli we do find may belong, as far as their microscopical appearances show, just as well to cholera morbus; or I may find only straight, rod-like bacteria mixed with a few curved ones, such as can be seen in all the excrements of ordinary diarrhœa; because it is a well-established fact, I think, that in the beginning of Asiatic cholera the characteristic spirillum can not be immediately recognized under the microscope. A better method, however, would be to place a drop of rice-water discharge upon a covering glass, and put the latter, with the drop of fluid downward, upon a shallow glass cell; if this suspended drop, which may be stained with one of the basic aniline colors, is examined with a powerful immersion lens, it is possible that we may find sufficient evidence to base a diagnosis upon. We shall see at least a large quantity of bacteria alive, and, if the fluid contains a sufficient quantity of the cholera bacilli, they will appear like a swarm of mosquitoes moving hither and thither, and among those there will be noticed occasionally a few spirilla of a wave-like form. So, at least, does Koch describe the microscopical appearance of a suspended drop of artificial beef-tea cultivation, and there is no doubt that the same may be observed if rice-water discharges are used for examination from a patient who has been sick for some time, but it is very doubtful if we shall be able to gain this result in the earliest stage of cholera.

Another method of distinguishing the cholera bacilli is published in the "Deutsche medicinische Wochenschrift," Berlin, April 2, 1885. Professor Max Schottelius, of Freiburg, went to Italy to study the cholera, and being admitted into a cholera hospital of Turin, he made numerous investigations. The principal result he obtained is the following: He mixed 100 to 200 c.cm. of the suspected fæcal matter, or rather rice-water discharge, with 250 to

500 c.cm of slightly alkaline meat-broth. This mixture must be shaken and put into a high beaker-glass. The glass must be put in a warm place, the temperature of which does not exceed 40° C., or 104° F. The fluid remains standing for from ten to twelve hours. After this time the surface of the fluid is touched with a glass rod, and a drop placed upon a covering glass; further preparation, and staining with a concentrated watery solution of fuchsin, as described before, will, under the microscope with a power of about 600 diameters, show almost a pure cultivation of the comma bacillus, if the case has been genuine cholera. Examination of a suspended drop of this mixture gives also a characteristic and perhaps still better demonstration. The surest method, however, suitable for diagnostic purposes, will be the cultivation with nutritive gelatin upon glass plates, and we shall find it of sufficient simplicity to make practical use of it, provided we are able to obtain at short notice the necessary nutritive gelatin of slight alkaline reaction. I herewith will mention briefly two formulæ found to be most efficient for use: First, 17 ounces of good, finely chopped meat, added to 34 fluidounces of distilled water, and well stirred, remains standing in the ice-box for twenty-four hours. Afterward the whole is strained through gauze by means of a press, and sufficient distilled water added to make again 34 ounces. To this must be added 2 1-2 drachms of table-salt, and from 1 1-2 ounces to 3 ounces of the purest gelatin; allow the whole to dissolve by gentle heat, neutralize with carbonate of sodium, and add a little of the latter in excess to give the mass a weak alkaline reaction, sufficient to turn red litmus-paper slightly blue. The neutralized solution must be boiled for an hour upon a water-bath and, still hot, filtered through paper. The filtrate, boiled again and afterward put upon ice, must be clear and transparent. During the boiling process a turbidity, caused by phosphates, may appear, which, however, will disappear as soon as the gelatin has been cooled upon ice.

Another process, described by Dr. F. Hueppe, professor of hygiene and bacteriology at the laboratory of Fresenius, of Wiesbaden, is the following: Peptone, 3 p. c.; grape-sugar, 0-5 p. c.; extract of meat, 0-5 p. c. and from 5 to 10 p. c. gelatin. I will not try your patience by giving the whole process necessary for this preparation. It will be sufficient, I think, if I mention that a little apparatus is required and a great deal of exactness and time. We as practical physicians, may have the former, but hardly the latter, at our command, consequently I would like to take the liberty of suggesting that Dr. Squibb, for instance, take the matter in hand and prepare for us the gelatin, or that the Board of Health establish a laboratory where not only shall the gelatin be prepared, but, under the supervision of a competent medical man, such investigations carried out as I have already suggested or shall hereafter describe.

Supposing we are in possession of the necessary gelatin and desire to make the cultivation as above mentioned. For this purpose we take an object-glass, according to the size of the stage of our microscope, to enable us to examine the same afterward in all directions with a lens. We put some of the nutritive gelatin into a test-tube and warm it in hot water until the gelatin becomes fluid; then, by means of a pipette, we carefully transfer some of the gelatin to the object-glass.

The portion of gelatin transferred must be a few millimetres thick and no part touch the edge of the object-glass. Then we take, with a sterilized platinum-wire, a drop from the rice-water discharges, and inoculate the gelatin by making a few strokes upon it of not sufficient depth to reach the glass below the gelatin.

The longer our object-glass, the more strokes we shall be able to make, and the easier it will be to recognize and differentiate the colonies of bacteria which will grow there. After the gelatin has been inoculated, the plate of glass must be placed under a bell-glass whose walls are dampened inside with distilled water. This, however, is not absolutely necessary. Eighteen hours afterward we shall observe the result of the inoculation by the growth of the different species of bacilli. In case of Asiatic cholera we shall observe in the early stages of the growth a small, pale drop, not of a perfectly circular appearance, such as almost all other colonies of bacteria present, but with irregular, rough edges. From the very beginning of its growth it has a granulated appearance. A few hours after the first appearance of these drops upon the gelatin the granulation appears more marked, and looks like a mass of irregular-shaped, highly refractive granules, which Koch compares to a little pile of small pieces of glass. Within twenty-four hours the gelatin becomes fluid in the immediate neighborhood of the colony, and the latter sinks deeper into the gelatin. A small funnel-shaped impression is formed, in the midst of which the colony may be seen as a small whitish spot or dot. For the purpose of making these observations, the glass plate must be placed under a microscope and examined with a power of about eighty diameters. In order to make these cultivations, a temperature not lower than 68° F. is necessary, which during the summer months will be easy to reach. In case we have to deal with a cultivation of the bacilli of cholera nostras discovered by Finkler and Prior, we shall find discs of a regular, even shape, and within thirty hours a funnel of 1cm.

in diameter will have formed, which in two or three days will have widened out to such an extent that the whole of the gelatin will have flowed off from the object-glass.

Those spirilla discovered by Deneke in cheese, and by Lewis found in the mucous covering of the teeth, I have nothing to do with in this paper; it will be sufficient, I think, to mention that they also present different appearances on cultivation, and that Dr. Lewis's bacillus does not grow at all in alkaline or neutral nutritive gelatin. If a small particle is taken, with a previously well-sterilized platinum wire, from one of the colonies recognized as Asiatic cholera bacilli, and gelatin kept in a test-tube inoculated with the same, we shall find that within forty-eight hours, at 68° F., from the time of inoculation, a whitish turbidity will start, in the immediate neighborhood of which the gelatin will become liquefied; but this process is so slight that only a very fine capillary tube will be the result, which becomes a little wider toward the surface. The top of this tube is generally below the level of the solid gelatin, and upon the top of the tube we generally see an air-bubble. The liquefied gelatin remains clear, and only upon a few places do a few whitish masses appear. After four to six days the gelatin will be sufficiently liquefied to reach the walls of the test-tube. The spirillum of cholera nostras, however, is characterized by its very energetic liquefying action upon gelatin.

Within twenty-four hours it has formed a wide tube filled with a diffuse opalescent fluid, and the surface of this tube extends to the walls of the test-tube. The lower end of the tube is widened out sack-like. I may add also that the cholera spirillum does not grow upon potatoes at a temperature less than 86° to 88° F. And from 98 1-2° to 99 1-2° F., it forms a dark-brown paste upon the surface. The spirillum of cholera nostras grows beautifully upon potatoes at 64.5° F., and forms a yellowish-gray covering.

However, before I proceed to make a cultivation of the bacilli to be found in the alvine evacuations, I first make an attempt to relieve the patient by a hypodermic injection of sulphate of morphine and atropine. I order frictions with soap liniment, chloroform, and laudanum to the body; also sinapisms alternately applied to the extremities and epigastrium, hot flat-irons or bottles filled with hot water to the soles of the feet, and try to administer a good dose of 10 to 15 grains of calomel internally, and order the same to be continued in small doses of about two grains every two hours.

I certainly shall not give bismuth, either the subcarbonate or the subnitrate, because I wish to avoid everything which tends to make the contents of the stomach and alimentary canal more alkaline. I do not expect anything from the calomel except from its property as a mercurial to destroy the cholera germ by acting as a poison directly upon the latter; and perfectly agree with the views of Dr. Pallen, of New York, who published the same in the *Medical Record* of March 7th, and who contended that during cholera the stomach and alimentary canal were not capable of assimilating any medicine whatsoever. For this very reason I shall also continue the hypodermic injections at proper intervals, and in accordance with the urgency of the case. Later on, when the condition of the patient requires it, I shall also administer brandy hypodermically.

But, gentlemen, I shall also remember the results of the treatment Prof. Cantani, of Naples, who during the last epidemic, resorted to acidulated enteroclysmata of a temperature from 103° to 104° F. According to Koch, one part of carbolic acid to 400 parts of water is sufficient to prevent the increase of the cholera bacilli, and, although we should not be justified in administering such a clysma to a healthy person, I believe that, in case of cholera where all the powers of absorption by the intestinal canal were suspended, we might perhaps be able to resort to this proportion with benefit to the patient. Although Prof. Armanni, of Italy, has found the microbes principally in the colon and cæcum, and a number of cases have been treated with simple medicated enemas with benefit, in severe cases, where the inroad of the microbe extends higher up, it will be necessary to resort to enteroclysma which will reach beyond the ileo-cæcal valve.

Of all substances, however, which prevent the reproduction of the cholera bacillus, the bichloride of mercury stands foremost. Oil of peppermint has this property in the proportion of 1 to 2,000, sulphate of copper 1 to 2,500, quinine 1 to 5,000, and the bichloride of mercury 1 to 100,000. For this reason I would try the sublimate in combination with hydrochloric acid; first as an ordinary enema, and later on, if I found the disease make progress and the case become desperate, as an enteroclysma. If, however, I were able to dust the whole of the alimentary canal over with calomel in the same manner as we sprinkle iodoform over an ulcerated surface, I think I should prefer the latter method to kill the microbe.

I am not aware that the sublimate has been tried in the manner proposed by me, and I certainly would abstain from its use in the beginning of the disease and before the faculty of absorption had ceased. The algid stage, I think, would be the proper time to begin with, and previous to it I should confine myself simply to copious enemas of hot water acidulated with hydrochloric acid, and administer the latter also by the mouth in the form of an iced lemonade to relieve thirst.

Whether an occasional enema or an enteroclysma of hydrochlorate of quinine, dissolved in hot water and acidulated with hydrochloric acid, would be desirable, I think a matter worthy of consideration.

Gentlemen, we put a typhus fever patient into an iced bath with the view of reducing his temperature. Would it be unscientific and unpractical to put a cholera patient into a *permanent* hot bath with a temperature, say, of 104° or over to increase his temperature? Koch considers the manner in which the cholera bacillus produces certain changes in the system a poisoning process, and states that in his opinion the poisonous properties of the bacillus act with paralyzing influence upon the circulatory apparatus, and, although this seems to be only theoretical so far, it would explain the fact that hot baths have proved of benefit in cholera. I must also allude to the transfusion of salt water into the venous system as advocated by Dr. Kronecker, who also gives a description of an apparatus to be used for the purpose, and who condemns the practice of intra-abdominal and subcutaneous injections, frequently resorted to during the last epidemic in Italy, on account of the impossibility of regulating the time when the injected fluids may enter the circulation.

During the same epidemic the following treatment was adopted. Cantani, Paoluzi, and particularly Dr. Vitone, speak of the excellent results of a clysma composed of

Inf. flor. camomill. (38° C.)	2 litres;
Acid. tannic	3,0—6,0 grammes;
Gumm. arab	30,0—50,0 "
Laudanum	30,0—50,0 "

which, freely administered, caused intermissions of from six to twelve hours. With all internal remedies for the purpose of disinfecting no result has been obtained. But all Italian authorities agree that subcutaneous injections of morphine have been of benefit. Of special benefit, however, have been irrigations per rectum of carbolic acid, sublimate, iron sulphate and quinine.

In the algid stage Cantani has resorted, with considerable benefit, to subcutaneous injections of salt water of the temperature of about 100° F. and in the proportion of thirty-four ounces of water, sixty grains of table-salt, and forty-five grains of carbonate of sodium.

He observed in the severest cases an abatement of all the urgent symptoms within a few minutes after this enema had been given. During the stage of asphyxia, subcutaneous injections of etherial tincture of valerian, ether and sulphate of caffeine were used.

The Italians also speak highly of hot baths and of the inhalations of oxygen. Cantani especially mentions that during convalescence we must be careful to avoid milk and beef tea or meat broths of any kind, because the comma bacillus is apt to grow in those media and a relapse may be the consequence. But between the two he would prefer meat broths, because he found that milk never did agree with his patients. His meat broths he acidulated with hydrochloric or lactic acid. In case, after the strength of the patient has returned, and vomiting persists in consequence of hyperæsthesia of the stomach, he recommends ether and chlorodyne, or cherry-laurel water with morphine or belladonna.

Dr. Dornbluth, of Rostock, recommends calomel to be given as I have recommended before, and particularly in the typhoid stage he calls attention to resorcin and cotoin. He speaks highly also of subcutaneous or intravenous injections of salt water to overcome the thickening of the blood. During the epidemic in Toulon the treatment of the so-called cholera diarrhœa consisted of

℞	Æther	1,0 ;
	Tinct. opii	gtt. xv–xx ;
	Ext. krameriæ	1,0 ;
	Syr. cort. aurant	30,0 ;
	Aq. melissæ	120,0.

against the vomiting, every quarter of an hour a teaspoonful of Chartreuse, sometimes bismuth and opium.

In more serious cases this treatment is combined with injections of warm wine and laudanum, carbonic-acid water cooled on ice, and, against profuse diarrhœa, water saturated with oxygen gas, to which I personally beg leave to object, as the cholera bacillus belongs to the species of aërobic bacteria and requires oxygen to develop. Frictions with ol. terebinthinæ, opodeldoc and chloroform are used. Hypodermic injections of morphine in the epigastric region are particularly mentioned by Dr. Cuneo, physician-in-chief of the navy of France, who has found great benefit from the hypodermic injection of half a centigramme of hydrochlorate of morphine with one quarter of a milligramme of atropine. Spasm of the muscles of the lower extremities he has treated successfully with hypodermic injections of ether.

During the stage of asphyxia, injections of ether prolonged life for a few hours in a few cases, but subcutaneous injections of atropine sulphate, first one half milligramme and afterward one milligramme, from four to five times in twenty-four hours, caused a rise of temperature of 2° in one case.

He also professes to have saved six patients with inhalations of pure oxygen by means of a mask and a tube, the latter introduced into the nares. In those cases where coldness and cyanosis did *not* form the prominent symptoms, this treatment, which he, by the way, repeated every half hour, and continued for two minutes each time, gave no results.

The question of prophylaxis requires consideration in this paper, and I would like to call attention to the remarks made at the meeting of the Imperial Board at Berlin, July 24, 1884, by Dr. Leyden, that a certain immunity exists against a second attack of cholera, although this immunity does not seem to be absolute, and it is well authenticated that persons have been attacked by cholera in one epidemic and died during a second attack in another epidemic. More rare, however, is the fact that a person has been attacked more than once during one epidemic, although Dr. Wievioroevski quotes the case of a patient who was taken sick August 13th, left the hospital well on the 20th, and was taken sick again with cholera on the 5th of September, and died. Dr. Koch, however, thinks that such cases must be very rare, and seems to be of the opinion that one attack secures the person against a second attack during the same epidemic in most cases. Perhaps being impressed with the same views, a Spanish physician inoculates his clients with the comma bacillus, as I have read in a daily paper. It is remarkable, however, that the medical papers are silent upon the subject, or that they only give short notices of Dr. Ferrán's investigations.* If Ferrán's microbes are identical with Koch's bacillus, it would appear impossible to inoculate them into the blood with any chance of success, because the circulatory system does not seem to be the home of this parasite. In none of the post-mortem examinations Koch has made could he detect this parasite outside of the alimentary canal, and only very rarely in the contents of the stomach. If found in the latter, it has been only in cases where a process of regurgitation had caused fæces to enter the stomach. The blood and other fluids of the body are not invaded by the bacillus, and not a single case is on record where infection has taken place from a post-mortem examination. Whether Koch's comma bacillus assumes different properties if cultivated and re-cultivated upon different nutritive media, is a question which later investigations will certainly solve. If I may venture upon an opinion at all in this matter, it is that, if artificially cultivated bacilli have the property of causing immunity from a severe attack of cholera, they should be introduced into the intestine and not into the circulation. The question naturally forces itself upon me, Is this microbe of Dr. Ferran's actually identical with Dr. Koch's bacillus, or is it the same Dr. Emmerich, of Munich, has discovered in the blood and in the tissues of the whole body of persons who died of cholera?

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* Only the "Deutsche medicinische Wochenschrift," of Berlin, April 20, 1885, speaks of the fantastic views of Dr. Ferrán in reference to his inoculation of the bacillus.

Dr. Emmerich also cultivated his bacterium, and inoculated various animals with the same. They all died, but post-mortem examinations seem to have revealed the fact that Peyer's patches were ulcerated, which led critics to assume that those animals did not die of cholera but of septic poison. Koch has made about one hundred post-mortem examinations in Egypt, India and France, and in all cases the result has been the following: He divides the results of his investigations into three different varieties—First, he mentions cases where the lower part of the ileum and cæcum, and particularly above the ileo-cæcal valve, had assumed a dark brown, reddish color, the mucous membrane being studded upon the surface with hæmorrhagic exudations. In a few cases he found diphtheritic patches, and the membrane almost necrotic. In accordance with this, the contents of the bowels were not of rice-water appearance, but a bloody, stinking fluid. In the second class of cases the redness was less marked, being only by spots, and in some cases only the edges of the follicles and Peyer's patches were reddened. The last form he considers to be particularly characteristic; it does not appear in any other affection of the alimentary canal and seems to be peculiar to cholera.

In comparatively few cases did he find the mucous membrane little changed; it looked swollen and less transparent in the upper layers, the solitary follicles and Peyer's patches were more prominent, the whole of the mucous membrane was of a light rose color, but in no case was there capillary bleeding.

In those cases which constitute the third class the contents of the bowels were colorless—not always like rice-water, but more like water which had been mixed with flour. Only a few cases came to his notice where the contents of the bowel were a watery mucus; the reddened edges surrounding Peyer's patches contained the most of the comma bacilli. All the animals which died after being injected with the virus presented the same symptoms and the same post-mortem appearances. Numerous experiments to this effect have recently been made by Koch, Klob, Nicati and Rietsch, Cantani and others, and all to the same effect. In addition to the foregoing, I may state that the spleen in cholera cases, and in animals which died after being injected with the cholera bacillus of Koch, has always been found atrophied. It seems that the spleen of animals inoculated with the bacterium of Emmerich was found to be the reverse. In my opinion, all the experiments made upon animals must be accepted with caution as regards their bearing upon the cholera-germ question, because no cases are on record in which an animal ever has taken the cholera during any of the great epidemics in India and in Europe. They seem to enjoy an immunity from this disease, and whether we are able to produce it artificially or not is a question not yet solved to my satisfaction.

After this digression, I beg leave to mention one prophylactic which enjoys a reputation with some medical men up to the present time. It is the sulphate of copper, to be taken daily in very minute doses, during the whole course of an epidemic. The French particularly seem to have been impressed with this belief, and Burq, the father of metallotherapy, recommended it in 1857. French medical papers also quoted instances where large bodies of troops marched through cholera districts and enjoyed immunity from the disease, which was explained by the fact that they had been constantly dosed with the copper during the time they traveled through the infected locality. Dr. Garrigues, formerly of this city, stated to me that he attended a hospital with six hundred cholera patients, during the year 1864, at Copenhagen; that he took daily small doses of the copper and did not get the cholera, but, as he remarked, other physicians in the same hospital, who also did not get the cholera, did not take the copper.

Gentlemen, I think the best prophylactic will be to avoid everything that tends to derange our digestive organs, and which may give rise to an intestinal or gastric catarrh. The healthy gastric juice will certainly kill the cholera germ; but an alkaline condition of the contents of the stomach will be the means of its passing into the intestinal canal, and then the mischief begins. I would, perhaps, recommend taking small quantities of hydrochloric acid every time we drink water. I should certainly prefer distilled or, at least, boiled water to the ordinary drinking water. Although the bacillus cannot live longer than two days and cannot reproduce itself in pure water, the ordinary drinking water may contain enough of the germ to infect us. The same with milk; milk should never be used unless it has been boiled first; then milk in particular forms a good nutritive medium for the microbe.

In the rooms of the sick I would strictly enforce the rule that nobody should be allowed to eat or drink except the patient, and I would urge upon the attendants to wash their hands with a solution of bichloride before taking food. I would not trust to any other disinfectants in the rooms of the sick, unless later researches should give us practical proof that some of the articles of commerce now in the market, and highly extolled as disinfectants, will stand the scientific test against cholera germs. It seems that all acids are not destructive to the cholera germs, as is proved by the fact that it will grow upon freshly cut potatoes, and such a fresh cut has an acid reaction. For this reason I would advise to abstain from the use of fruits, apples in particular, because, besides that they have the faculty of rendering the contents of the stomach alkaline, they may also be the direct means of introducing the bacillus into the stomach. In using disinfectants we should strictly avoid those which retard putrefaction, for it has been amply proved that the bacillus of putrefaction is the deadliest enemy of the comma bacillus, and that wherever the former appears the latter disappears. To put sulphate of iron into a cesspool containing excrements of human beings during a cholera epidemic would prepare a good nutritive element for the germ. I would like to call the special attention of our Board of Health to the cesspools of our public resorts, especially Coney Island. If no proper care is exercised in disinfecting the same, they may be the cause of much suffering. Bichloride in liberal quantities, often applied, will be the only means, in my opinion. Not those means which only deodorize come into consideration in this momentous question, but those disinfectants which kill the germs of the disease. The best of all means of killing the cholera bacillus is dry heat. If it is subjected to a drying process it will die within a few hours. For this reason I mentioned before that I did not think the importation of rags from Europe could import the disease, also because all rags, before they are shipped for commerce, are subjected to a drying process. For the reason that dry heat kills the germ, I would recommend stopping the sprinkling of the streets during an epidemic of cholera, and I would also recommend that all the bed-clothing of cholera patients, and all the personal wearing apparel used during their illness, be subjected to a process of dry heat. If all the excrements could be destroyed by fire, it would be better still; but, as such a process would be difficult or impossible to accomplish, let us boil, at least, the clothes in a solution of bichloride, and then subject them to a process of drying in a hot stove, and if they burn it will be all the better. No wet clothing of cholera patients should be allowed to hang out in the yards or upon the roofs of houses to dry, as there is such a possibility of a strong draught of air taking up the germ and carrying it to a soil where it may grow and increase. Gentlemen, you will remember the appropriate remarks made by the medical officer of the navy who visited our last meeting. You will remember that he told us that during a time when cholera was raging in India a United States man-of-war was lying in the Ganges in midstream, and none of the officers or crew took the cholera. Why did that happen? First, the proverbial cleanliness on board a United States man-of-war, and second— and may be, perhaps, first—because they drank only distilled water.

Although I told you that the comma bacillus could live only a few hours in water, and did not multiply there, it may grow upon the soil of the banks of a river, provided the soil happens to have some of the elements necessary for its reproduction. The stream of water may carry the germ along, and by that means become the cause of the disease—one reason more why we should drink only distilled or boiled water during those times, and why we should not sprinkle the streets. I beg leave to mention that Dr. Koch spoke to the Medical Society of Marseilles, and stated that, in his opinion, chloride of lime must not be relied upon as a means for disinfection. He advises keeping a five-per-cent solution of carbolic acid in all vessels used in the room of a cholera patient. The best means of destroying the germ he considers hot steam, which must be used with an apparatus from which a jet of steam issues of a temperature of 100° C. Such a system may well be carried out in hospitals, etc., but in private dwellings, tenement houses, etc., it will be impracticable, and I think boiling with a strong solution of bichloride, and afterward drying in a hot stove, will answer our purpose in private practice. The solution of sublimate which he recommends as wash-water for the hands of nurses and physicians who attend cholera patients should be of the strength of 1 to 1,000. Koch also urges to avoid drinking water unless it has been previously boiled, and he himself, during his stay at Marseilles, drank only mineral waters, and always washed his hands in a solution of sublimate before he took his meals. He strongly urges the washing of all cooking utensils, glasses, etc., with boiling water, and is of the opinion that, although beer in all probability does not contain the microbes, the water in which the glasses have been washed may do so, and thus cause infection.

Gentlemen, I am of the opinion that our system of sewerage, our water supplies, etc., and the general sanitary condition of this city, thanks to the efforts of the Board of Health, are such that we may consider ourselves well prepared to meet the enemy if he attempts an invasion.

We hear of unclean streets, and in some parts of the city an improvement would be desirable, but, on the whole, we may compare well with such cities as Naples, Toulon or Marseilles. Although it may be comfortable to contemplate this condition of affairs, vigilance in sanitary matters must not cease, and we, as physicians, should be willing to lend a helping hand to the efforts of the Board of Health to suppress an epidemic by reporting every suspected case as soon as it occurs. I contend that private interest must not be taken into consideration as long as the public welfare is at stake.

I have not mentioned in this paper the report of the English commission which was sent to India to investigate the cholera. The exact words which Dr. Klein used in his report, March 24th, before the Royal Medical and Chirurgical Society of London, copied from the London *Lancet* into the *Deutsche medicinische Wochenschrift*, April 16, 1885, are the following: "Comma bacilli of various species have been discovered in other diseases of the alimentary canal, in the fluid of the mouth of normal persons (Lewis), and in old cheese (Deneke). The comma bacilli found by Finkler and Prior in cholera nostras differ in mode of growth from Koch's comma bacilli of cholera; so do those found in diarrhœa due to other causes; but those of the fluid of the mouth are identical with Koch's comma bacilli in *many* respects."

He admits, consequently, that they are not identical in *all* respects, and I may refer you to my former remarks that Dr. Lewis's bacilli do not grow upon alkaline nutritive gelatin. I would recommend to all those of you gentlemen who wish to be informed upon the subject of the cholera bacillus to read the reports to the Scientific Grants Committee of the British Medical Association, by W. Watson Cheyne, Assistant Surgeon to King's College Hospital, etc., and Research Scholar of the British Medical Association, as published in the *British Medical Journal.* One of the articles published in the *Journal* of May 2, 1882, I have seen through the kindness of Dr. Hunt, and I found it to be such a lucid and true *exposé* of Koch's discoveries that I beg leave to mention it here. It gives all the illustrations, partly after Koch, and in a great measure after Mr. Cheyne's own investigations, and mentions also the later highly interesting researches of a Mr. E. M.

Nelson in reference to the discovery of the flagella of the bacillus, before unknown to me. I would not have mentioned Dr. Klein's report in this paper, because I considered the matter settled, had not an allusion to it been made at our last meeting, and if the President of the Medical and Chirurgical Faculty of Maryland, at the annual session, May 12th, as reported by the *Medical Record*, May 16th, had not stated in his opening address, "Origin and Diffusion of Cholera," that "he did not consider the parasitic origin of the disease proved, because Koch had not succeeded in producing the disease by injecting the comma bacilli, and Lewis had demonstrated the presence of bacilli in the human system under other circumstances." But not alone Koch, but Klob, Rietsch, Nicati and others have successfully injected the comma bacillus into the intestines of animals, as already stated before, and Lewis's bacillus is certainly not identical with Koch's. Gentlemen, if a physician has a suspected case of kidney disease, he is expected to test the urine for albumen, and examine into the percentage of urea, and look for casts, etc.; but, when it is necessary to make a quantitative analysis of the urine, he will be obliged to get a specialist to attend to the matter; for, even if he has the necessary knowledge and apparatus to do so, he has not the time. If a hospital surgeon removes a tumor from a patient he turns the specimen over to a pathologist for microscopical examination, and I think it will be the same with the examinations of the excrements of suspected cholera cases. We, as practical physicians, will be able to make the primary examinations by cultivation and with the microscope; but when it comes to further scientific researches into the matter, there our duty ends, and also our ability. A constant, untiring observation, together with the minutest attention to details, is necessary to carry out the investigations, and those of us who undertake to work further upon this field, with the hope of adding something new to the general knowledge, will be sorry to find that they worked in vain because they have no time for such researches. We have to content ourselves with utilizing the discoveries made by those who make it their sole study. If the German Government, however, thinks the matter of sufficient practical importance to detail by turns all the medical officers of the army to take a course in the laboratories of the Board of Health at Berlin, to enable the army physicians to make the necessary investigations for diagnostic purposes, I think it will not be out of the way if I herewith respectfully suggest that our Board of Health detail one of its members to take a course at the lately established laboratory of the Bellevue Hospital Medical College, for the purpose of familiarizing himself with the technical methods of making such investigations, and if, with a little financial aid from the city, the Board of Health could afterward establish a laboratory for biological researches, it would materially further rational sanitary purposes.

THE TECHNIQUE OF INTRAVENOUS SALINE INFUSIONS FOR THE RELIEF OF THE COLLAPSE OF CHOLERA.

BY LEWIS S. PILCHER, M.D.

To the surgeon who is familiar with the conditions of acute anæmia and of shock and collapse following injuries, or surgical operations, the condition of collapse which marks the final stage of cholera, and the extreme depletion of the blood-vessels of the body of the watery elements of the circulating fluid, which is the consequence of the great drain upon them from the prolonged and profuse watery bowel-discharges, present themselves as conditions which he is frequently called upon to combat in his ordinary work. In the condition of vascular depletion, surgeons find that no procedure is attended with such immediate and unmistakable benefit as the direct infusion into a vein of a considerable bulk of warm saline fluid.

The proposition, therefore, to make use of the same resource to combat the collapse and vascular depletion of cholera is both rational and sustained by abundant surgical experience in somewhat similar conditions. It is true that in cholera there is present a different element, perhaps profoundly altering the prognosis, in the presence in the blood of poisonous ptomaines absorbed from the alimentary canal, and possibly acting directly upon the vital nerve-centres as a depressant; but on the other hand the corpuscular elements of the blood still remain in the vessels not materially changed in their number, needing simply a proper amount of fluid vehicle to float them and sweep them along. In acute anæmia the entire blood has become diminished in quantity, and the infusion of water establishes for a time a condition of relative hydræmia; nevertheless it has been well established that even in the vessels of a person who has bled to death, there are enough of the corpuscular elements still present in the vessels to maintain life, if only a sufficient volume of fluid could be present in the vessels to distend them to a point adequate for the circulation to be maintained.

Experiments have shown that water may be poured into the blood-vessels of an animal, already depleted by bleeding nearly to the point of death, in quantity amounting to half the normal bulk of the blood in the body, without other than good resulting. A greater proportion than this, however, is likely to be fatal. In an average adult human being, therefore, who is moribund from loss of blood, it is safe to continue an injection until as much as two quarts of fluid has been infused, if the circumstances of the case seem to require as much. In cases of cholera-collapse, probably a much larger quantity could safely be infused, since the proportion of the corpuscular elements is so much greater.

The amount of fluid injected should be gauged by the results upon the circulation, rather than by watching the measuring glass. The injection should be persisted in until the pulse has regained its normal volume, the return of consciousness shows that the blood-vessels of the brain are again filled, and the warmth of the extremities indicates that circulation in them is satisfactorily reëstablished.

As substitutes for direct injection into a vein it has been proposed that multiple injections of a saline solution into the connective-tissue spaces be made by means of a fine trocar connected with a proper syringe, and that copious enemata of warm saline fluid be thrown into the colon by means of a proper tube passed as high as possible. While both these devices must be of considerable value, they are limited, since they depend for their good effects upon the activity of an absorbent action of the tissues which is in great measure arrested by the very disease which is to be combatted. Considerable uncertainty attends therefore these procedures, and they cannot be accepted as of equal value with the intravenous injections. The technique of the intravenous injections becomes therefore a matter of much interest whenever cholera, by its actual or threatening presence, forces itself upon the attention of the physicians of a community. It is a minor operation, easy of execution to one possessed of the required anatomical knowledge, and some familiarity with the manipulation of instruments. Every precaution possible should be taken throughout the procedure to observe the requirements of asepsis.

The *fluid* for injection consists of recently boiled water holding in solution common salt in the proportion of about six parts of the salt to one thousand of water. Ninety-two grains of salt to one quart of water will make such a solution, but if the necessity for the preparation of the solution is urgent where facilities for weighing out such a quantity are not at hand, a simple heaping teaspoonful of salt will be found to sufficiently approximate the quantity desired, for all practical purposes. It is recommended in addition to add one-sixth as much of carbonate of soda as of salt, but this is not essential. The temperature of the fluid should be slightly above that of the blood normally; about one hundred degrees is the best to have.

The *injecting apparatus* for introducing the fluid into the vein—a small cannula whose point is not too large to be easily introduced into a vein of medium size is the first requisite. Such a cannula can be extemporized from a bit of glass tubing by the aid of the flame of an alcohol lamp, by which it can be softened sufficiently to be drawn down to the required size and shape. A small funnel and a yard or more of clean rubber tubing connecting it with the cannula complete the apparatus required.

If the surgeon happens to possess the apparatus of Collin devised for transfusion purposes, it will be found a very convenient model, since it combines in one instrument a funnel and a syringe, and ensures a steady delivery of fluid into the vein at whatever rate the surgeon may desire.

An ordinary bulb syringe, like the Davidson model for instance, if it is perfectly clean, may likewise be used with success. Whatever apparatus is used should be sterilized before using. In default of other means of disinfection, it may be thoroughly scalded out with boiling hot water.

The exposure of the vein requires a suitable knife, a pair of scissors, a pair of anatomical or mouse-toothed dressing forceps, and a small aneurism-needle, for its easy performance. An ordinary curved surgical suture-needle will do very well instead of the aneurism-needle. Some thread for ligating the vein is necessary. Catgut is preferable, but not essential. Any superficial vein of good size may be chosen for the injection. One of the veins at the bend of the elbow will usually be found the most convenient; ordinarily the identification of these veins presents no difficulties, but in a bloodless, collapsed patient, the vessel which in ordinary circumstances could be readily seen as a plumply distended cord of some size, becomes a shrunken, almost colorless band, which may readily elude the search of the unaccustomed operator. It is, in such cases, to be remembered that the superficial veins lie between the two layers of the superficial fascia, and that it is in this location that a search is to be made after the primary incision through the skin and first layer of fascia has been made in the usual situation of the vein chosen. The vein should first be distended as much as possible by a bandage thrown tightly around the limb on the proximal side of the point chosen for incision.

The best way to expose the vein is by raising a fold of the skin and superficial fascia between the finger and thumb of the operator and of his assistant, and transfixing it with a bistoury, which then is made to cut its way out. When this has been done, the vein will be found to be freely exposed at the bottom of the gaping wound. A few touches with the point of the knife along either side of the vein may be required to more fully isolate the vessel from the surrounding connective tissue. This having been done, a ligature should be passed beneath the vessel at the lower angle of the wound, and another at the upper angle, the two being, perhaps, three-quarters of an inch apart. They are left untied for the time being.

The insertion of the cannula being now ready to be proceeded with, the anterior wall of the vein, at a point midway between the two ligatures, is seized by the mouse-toothed forceps, raised up and a bevel snip is made with the scissors about half-way through the vessel. As the flap of the vein wall is held up by the forceps, the point of the cannula is slipped into the opening for some little distance and is held securely in place in the vein by tying the upper ligature, already arranged for the purpose. Care should have been taken that the tubing connected with the trocar is filled with the warm solution when the trocar is introduced, so that no air shall be unwittingly injected. The lower ligature may now be tied and everything is ready for the injection to be made.

The *injection* should be made slowly and steadily. If hydrostatic pressure is relied on to produce the injecting force, this force can be regulated by raising or lowering the funnel as occasion may seem to require. The amount of the fluid thrown in should be gauged by the effect on the circulation. When the radial pulse is felt to have become full and its beats have become reduced in number to about one hundred per minute, the injection should be suspended. It will be found necessary usually to throw in between one and two quarts of fluid. Not infrequently after a few hours the effect of the injection will seem to have passed away, and a relapse of the threatening symptoms will appear. In this case the injection should be repeated but a new vein should be selected for the purpose. As soon as the injection is suspended, the cannula should be removed, the ligature drawn tight so as to occlude the vein, and a proper dressing should be applied.

The care of the wound is simple. The lips of the incision are to be brought together by a few points of suture. An antiseptic compress is applied over the site of the wound, held in place by a suitable bandage, and the arm carried in a sling for a few days.

A LAY OPINION OF THE MEDICAL PROFESSION.

[From the New York *Sun*, August 28, 1892.]

In times of danger from pestilence, at all times when the public health is imperilled, the doctors come to the front with heart of grace, ready to take any risk and to go wherever duty calls. We have not forgotten how hundreds of them offered and gave their services last winter when the city was threatened with an epidemic of typhus—young medicos many of them, just entering upon their professional career. There seemed to be rivalry among them at times to get to the most dangerous posts, even to North Brother Island. They displayed again the same noble mettle when there was apprehension of the spread of small-pox. They are displaying it now once more when the Asiatic cholera is threatening to invade our country.

Let us praise the worthy doctors, the ever-undismayed doctors, always ready to undertake any professional duty, however dangerous or unpleasant it may be.

As it is here, so it is all over the world. It is a striking item of news that we got last week from the city of Vienna, in Austria. The Asiatic terror is confronting Vienna, and here is one of the dispatches from there:

"Vienna, Aug. 25.—In this city 485 doctors have offered to attend cholera patients, on condition that in the event of their death while in the discharge of duty, their families shall be provided for."

Could men do more than this? Could any sacrifice be more impressive than that which these Viennese doctors thus offer? There are such doctors in Paris and Berlin and London and Hamburg and Antwerp and Havre and all other cities, including, we have not a doubt, the plague-smitten cities of Russia. We have plenty of such doctors here in New York. Honor to them!

In ancient times that illustrious Pergamite doctor, Galen, confronted the pestilence, probably cholera, that raged in the Roman camp at Aguileia. Centuries before his time, that still more renowned doctor Hippocrates of Cos, strove to master those epidemics which entered Greece from Asia, and about which he wrote. Thus have doctors always acted everywhere in times of plague. Truly, the immortal Socrates spake wisely and well when, after the poison had reached his heart, he uttered those last words of his life: "Crito, we owe a cock to Æsculapius; pay it, and by no means neglect it."

BROOKLYN VITAL STATISTICS FOR MAY, JUNE, JULY, 1892.

By J. S. YOUNG, M.D., Dep. Commissioner of Health.

Population estimated July 1, 1892, 962,530; Births reported, May, 1,418; June, 1,288; July, 1,430. Deaths reported, May, 1,617; June, 1,518; July, 2,621.

CAUSES OF DEATH.

	May	June	July		May	June	July
Croup,	26	21	19	Diphtheria,	72	45	51
Scarlet fever,	37	23	12	Typhoid fever,	3	5	15
Whooping cough,	5	8	28	Pneumonia,	240	114	164
Measles,	26	44	22	Diarrhœal diseases,	11	151	896

REPORTED CASES.

	May	June	July		May	June	July
Scarlet fever,	404	191	82	Diphtheria,	151	115	98
Measles,	637	740	273	Small pox	11	8	0
Typhoid fever,	21	21	18				

DEATH RATE.

	May	June	July		May	June	July
Brooklyn,	19.98	19.39	32.15	New York,	25.79	24.07	34.26
Philadelphia,	23.28	20.15	29.20	Berlin,	18.65	20.84	18.91
Paris,	24.50	27.48	23.34	London,	19.55	18.58	18.47

THE DISGUSTED BACTERIA.

In New York in September,
In a torrid autumn term,
A cholera bacillus
Met a typhus fever germ.

And the latter cried, "Friend 'Cillus,
Why how are you to-day?
I just read in the papers
You were penned up down the bay."

Then 'Cillus winked his other eye,
An said :—" Dear brother 'Phus,
It takes more than a quarantine
To get ahead of us.

"Just because you came from Russia,
And I from Teheran,
Folks think we're just as foolish
As this biped creature, man.

"But now that we are in here,
Let us show this Yankee crew

What hard working foreign emigrants
  Like us two sports can do.

"You go over in 'Hell's Kitchen.'
  While I stay here in 'The Bend,'
And we'll make these people dizzy
  And a jolly time we'll spend."

Then Mr. Typhus answered—
  "You have your plans laid pat,
But I fear, dear Cousin 'Cillus,
  That you're talkin' through your hat.

"For a year I've tried to settle
  In the swamps or on the ridge,
But the Health Board's kept me a humpin'
  From the Battery to the Bridge.

"What with cussid disinfectants,
  And their everlastin' stinks,
I haven't had a single sleep
  Of more than forty winks.

"I'm goin' back to Europe,
  Where the people always give
Hard workin' bacteroids like us
  An even chance to live.

"And if your head is level,
  You'll grab your coat and grip,
And 'stead of fightin' Yankees
  You'll join me for the trip."

Bacillus he was pained indeed,
  And said :—"That's sad to hear,
And I think that I'll go with you,
  For here comes Microbus Fear.

"He always follows where I go,
  And stays where I abide,
And downs a dozen to my one,
  Confound his measly hide !

"He grows fat on fumigation,
  And boiling he derides;
At arsenate he snickers,
  And just laughs at bi-chlorides.

"You couldn't kill him with a club
  He's so almighty tough!
While almost anything downs us,
  And that's what I call rough !"

"Don't worry, 'Cillus," said his friend,
  As they sprinted for a ship,
"You'll get the glory, though it's Fear
  Who'll make these sinners zip !"

And so the twain, disgusted,
  Departed from our strand,
But left behind Microbus Fear
  To ravage all the land !

CLARENCE LADD DAVIS.

GABRIEL FALLOPIVS MVTIN.^{is}
PHILOSOPHVS ET MEDICVS.

GABRIEL FALLOPIUS

was, according to Cuvier, one of the three great naturalists who contributed to the revival of the study of anatomy in the 16th century; the other two being Eustachius and Vesalius. He was the pupil of the latter, and his successor as professor of anatomy and surgery at the university of Padua, where he was himself in turn succeeded by a pupil no less renowned than the discoverer of the valves in the veins. What a glorious century for that renowned unversity, when it had the chair of anatomy successively filled by such masters as Vesalius, Columbus, Fallopius, Fabricius and Julius Casserius (1537-1616).

Fabricius was descended from a noble family, and born at Modena, in Italy, about the year 1523. He enjoyed a strong and vigorous constitution, with vast abilities of mind, which he cultivated by an intense application to his studies in philosophy, medicine, botany and anatomy. He studied medicine at Ferrara, where he after travelling through the various countries of Europe, began his career as professor of anatomy. He was appointed professor of anatomy at Pisa, in 1548, and in 1551 he removed to Padua, where, in addition to the chairs of anotomy and surgery, he also held the office of director of the botanic garden. Here he enjoyed a brilliant career, and died in 1562.

He published in 1561, his great work: *Observations Anatomacae*, which was one of the best anatomical treatises of his century, and has been several times reprinted. This was the only work of his published during his lifetime; but his collected works, as published in Venice in 1606, embrace twenty-four treatises, distributed in three folio volumes. He was an eminent practitioner of medicine, but it was in the field of anatomy that his laurels were won. No less than two of our organs bear his name, only one of which, however, did he discover. The Fallopian tubes had been known for centuries before his time; but Fallopius described them with minuteness and discovered their use, designating them as *tubae seminales*.

He gave an exact description of the structure of the ear; discovered the *aqueductus Fallopii*, and first demonstrated the communication of the mastoid cells with the cavity of the tympanum; and also the fenestræ rotunda and ovalis. He was the first to give a good description of the ethmoid and sphenoid bones, the muscles of the soft palate, and the villi and valvulæ conniventes of the small intestine. Vesalius corrected the anatomical errors of Galen, but to Fallopius fell the greater task of correcting the mistakes of his renowned predecessor whose mistakes in mycology he points out with no friendly spirit. Dr. Fisher compares the animosity which existed between these two great masters to two stars which could not keep their orbits in one sphere. It is said that Fallopius was generally intolerant towards his contemporaries.

He was also celebrated as a botanist and a genus of plants, the *Fallopia*, are among the monuments to his memory. He also wrote on other things bordering on the subject of medicine.

Fallopius experienced the difficulties which lay in the way of the study of practical anatomy during the period in which he lived, and it is related that he was in the habit of obtaining criminals from the court to dissect. Russell says that "it is but fair to state that he poisoned them first," as he tells us in the following passage: "For the prince ordered a man to be given us, whom we killed in our fashion, and dissected (*quem nostro interfecimus et illum anatomizavimus*). I gave him two drachms of opium. He, having a quartan ague, had a paroxysm which prevented the opium taking effect. The man in great exultation, begged of us to try once more, and if he did not then die, to ask the prince to spare his life. We gave him another two drachms of opium and he died."

J. H. H.

THE

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

VAGINAL HYSTERECTOMY AND HIGH AMPUTATION, OR PARTIAL EXTIRPATION BY GALVANO-CAUTERY IN CANCER OF CERVIX UTERI. AN INQUIRY INTO THEIR RELATIVE MERITS.[1]

BY JOHN BYRNE, M.D., M.R.C.S.E.

President's Address delivered at the Meeting of the American Gynæcological Society, held in Brooklyn, September, 1892. Published in compliance with the request of the American Gynæcological Society.

Fellows of the American Gynæcological Society :

It is fitting that I should embrace this first opportunity since our last meeting to thank you most heartily for the unsolicited honor which you have conferred upon me by electing me to preside over your deliberations. Indeed, I feel I would be wanting in a due appreciation of so high a mark of your esteem and confidence, if, while acknowledging my obligation, I failed also to solicit your aid and forbearance in the discharge of my responsible duties.

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[1] This Address appeared in the October issue of the *New York Journal of Gynæcology and Obstetrics*, among original communications without the consent of the Author or of the Editorial Committee.

As I call to mind the first meeting of this society sixteen years ago, at which the loved and lamented Barker presided, and with that grace and intellectual elegance so characteristic of the man; of the distinguished and truly representative character of those who took a prominent part on that and subsequent occasions, and when I think of the chosen ones on whose shoulders from year to year the untarnished mantle of our first president has fallen, it surely becomes me, not only to express my thanks, but more particularly to crave your fraternal indulgence.

The pleasure of greeting the members of this society, need I say, is heartfelt, and yet, the gratification of welcoming to Brooklyn, for the first time, an association so distinguished is not without an alloy of regret as memory recalls the many absent ones ; some in Europe ably representing the cause of American gynæcology at the Congress in Brussels ; others detained by pressing professional duties; the declining health of one,[2] whose brilliant services in the past have shed lustre on our organization, and lastly that sorrow which the inevitable tribute exacted by death must always engender.

It is to be regretted that at this stage of our proceedings custom should have made it, in a measure, obligatory for me to trespass on your valuable time by any formal remarks, however brief. Because, when we consider the extent of our programme and the number and great practical value of papers to be read and discussed, it will readily be conceded that we have no right to waste time in the consideration of matters of more general interest. Besides it is of the first importance that distinguished Fellows, some of whom have traveled from distant States, and who have taken the trouble to formulate their views and thus further enrich the archives of our society, should have ample opportunity afforded them for profitable discussion and a free interchange of opinions. There is no way by which scientific material can be utilized to better advantage than by subjecting the product of individual brain and industry to intelligent, honest, and fearless criticism.

That this feature in our organization has been duly appreciated, and, as far as practicable, encouraged I believe, and yet its vast importance would seem to warrant the inquiry as to whether or not, by some modification of our rules, more time and a wider latitude should be allowed in our discussions, because the position of this society in the scientific world will depend not only on the character of its papers, but in no less a degree on the high tone and freedom of its discussions. I am fully alive to the necessity for fixed rules of debate in all well ordered societies, and in a scientific body like ours that their strict observance is essential to order and the expeditious disposal of the work mapped out in our programme; nevertheless, when we consider the peculiar nature of our organization, the representative character of its members, and the long interval between our meetings, it seems to me that no more than one-half of the time of each session should be devoted to the reading of papers ; that half an hour only should be allowed to each, and that the number of papers to be read at each session should be limited to three, or in all eighteen. This would allow ample but certainly not too much time for discussion. and as there is in our association a conspicuous absence of the redoubtable medical society orator, endowed with the peculiar faculty of employing words to supplant ideas, and who is always ready to advance a theory or a reason for everything, except perhaps as to how or why he himself should have earned celebrity or even recognition, there would, I imagine, be no danger that a little more liberty as regards time would be abused.

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[2] Dr. Robert Battey.

From these considerations I feel it incumbent upon me to occupy as little of your time as may seem to comport with my official duties and a due regard for the best interest of our society. After what manner I should proceed to obtain this most desirable end has been, I assure you, no easy matter for me to decide. To attempt an elaborate review of the rise and progress of gynæcology, though not without precedent, would, in my opinion, be an unpardonable infliction, and, considering the character of my audience, no less "stale, flat and unprofitable" than thread-bare subjects usually are. Quite as objectionable also and of questionable taste would it be to indulge in laudatory remarks on the work of this society and its widespread influence at home and abroad during the sixteen years of its existence. Its labors in behalf of suffering women, as exemplified in its published transactions, speak volumes, aye, sixteen times more convincing than the most elaborate eulogy. It is enough to say that from this source alone the student in gynæcology, (for we are all students), may glean the fruit of mature and well-digested experience.

Let this cursory reference to our good deeds suffice for the present. They have become the property of the entire professional world, and to that tribunal alone should we look for approbation.

My distinguished predecessor, Dr. Jackson, in his able address at our last meeting, took occasion to allude to certain abuses which had crept into the practice of gynæcology. One of these was the alarming extent and frequency to which, through the beneficent but seductive agency of antiseptics, surgeons have been tempted to resort to dangerous and mutilating operations on the sexual organs of women.

This blot on our escutcheon I am happy to believe is rapidly becoming effaced, and I refer to it now merely to emphasize his forcible and timely warning. Such abuses, however much to be deplored, are in a measure inseparable from progress, and must be looked upon as the tribute of suffering humanity to science; strictly speaking they need but a passing comment, as they are sufficient for their own correction. Another equally deplorable cause of complaint was the subjecting of young and unmarried women to speculum examinations without due cause, and of which at least one disgraceful example was detailed. This is an abuse of so grave a nature and so pernicious in its tendency as to need no apology for again invoking your efforts toward its suppression. It will not suffice that we claim for ourselves and those in our special branch of medicine a comparative freedom from such abuses, and point to the cupidity of the general practitioner as a main source of the evil. It is our imperative duty as individuals, and certainly within the scope and province of societies like ours, to take cognizance of and to discountenance it. Instances have but too often come to my own knowledge, and must I fear be only too familiar to many here present, of moral and physical wrecks originating largely in this abominable practice. It is not too much to assert that very many of these deluded victims of a sacred confidence thus shamefully abused might have their modesty shielded and their infirmities cured by the aid of rational and judicious therapeutics, now, alas! so unpopular. Such, I assume, is the opinion of every experienced gynæcologist, and the remarks of our revered first president, in his address on "Medical Gynæcology" fifteen years ago, were doubtless prompted by his keen appreciation of these facts. His unassailable propositions touching meddlesome gynæcology were based on sound principles and supported by his own large and ripe experience. One declares that "*flexions in the virgin cause no symptoms except a slight dysmenorrhœa unless there be some vitiation of the general health, defective nutrition, neurotic disturbances or pathological changes other than the flexion.*" And again, "*all treatment, whether local, surgical, or mechanical, will fail in curing uterine disease so long as the blood is deficient in its proper proportion of nutritive elements, and therefore appropriate constitutional treatment is essential to success.*" The sound principles thus enunciated are as applicable to the practice of to-day as they were to that of the past, and physiological laws, pathological researches, and moral ethics unite in demanding their observance by the specialist as well as by the general-practitioner. Indeed, nothing less than the strongest presumption as to the existence of serious pelvic disease, and which judicious constitutional treatment has failed to relieve, can warrant speculum, or even digital, examinations in young and single women.

I trust I shall not appear as taking advantage of my position, or in any manner abusing the privileges due to your courtesy, if I ask your attention to a matter which, while it concerns a most important and, alas! too numerous a class, is one, also, in which I have a deep personal interest. It is a subject, moreover, regarding which the entire profession of medicine from the earliest period has taken a more than ordinary interest, and in its beneficent search after some means of relief for the afflicted has always, *until of late*, manifested the most liberal and humane spirit of inquiry. I refer to the surgical treatment of cancer of the uterus, and the prevailing disposition on the part of the more aggressive and radical members of our profession to disregard all means of relief save one, and that a dangerous, mutilating, and, as I hope to show, comparatively fruitless proceeding at best.

Some years ago there appeared in our midst a prominent advocate of hysterectomy fresh from his anti-uterine campaign of sixty-six hand-to-hand conflicts and eleven mortuary trophies. Thanks to the able, fearless, and timely protest of Dr. Jackson, who by his incontrovertible facts and sledge-hammer logic was the first to sound the alarm and plant the danger-signal, the great bulk of our brethren refused to be swayed by plausible arguments, or to accept conclusions which seemed to them wholly unwarranted and to say the least, premature. Some there were who, though willing to concede to hysterectomy a limited field—one strictly within pathological and rational bounds, yet skeptical as to the possible realization of hopes then indulged, were, nevertheless, not averse to testing, in suitable cases the heroic measures so forcibly advocated. There were not a few, however, who, probably finding the supply of removable ovaries and tubes becoming exhausted, and being unable to withstand the robust and persuasive eloquence of one who had just come fresh from the seat of war, determined forthwith to buckle on their armor and sally forth to do and to publish as many hysterectomies as they could find patients to submit to and live, but, *de mortuis nil.* By a few of the former class we have been favored with the net results of their careful, skilful and conscientious work, and in some noteworthy instances it cannot be denied but that they fully sustain the conservative views of Dr. Jackson.

Thus, in the frank and unqualified statement of a leading member of this society, Dr. Reamy, regarding his experience in twelve cases, we have an example—but alas too rare!—of that scrupulous regard for the truth and the whole truth, which neither courts applause nor shrinks from criticism. Here we are told not only of the number who have escaped the more immediate dangers of the operation, but, what is of equal significance, the degree to which their periods of life expectancy have been curtailed through reckless surgery. Another equally conscientious and able Fellow[3] has not hesitated to proclaim, in the face of his well-known skill as an operator, four deaths out of sixteen cases.

In this connection, still another noteworthy example of the disposition on the part of some of our ablest Fellows to "render unto Cæsar the things that are Cæsar's," merits special mention and earnest commendation. I refer to a paper entitled "The Limits of Vaginal Hysterectomy for Cancer of the Uterus,"[4] being a clinical *résumé* of the work of two accomplished, expert, and painstaking operators, and every sentence of which bristles with startling facts and keen and unassailable logic. The author of this paper tells us that "the writer's purpose in presenting a paper which partakes of the character of a personal confession is simply to abjure an error into which he believes he has fallen, fortunately at the outset rather than at the end of his professional career." Who of us could have listened to or read this masterly and timely presentation of the subject, without a feeling of pride in the reflection that sentiments so free from the taint of personal gratification and so fearlessly uttered, should have emanated from and actuated one of our own Fellows. The result in nineteen cases may be summarized as follows:—Five (5) died from operation, and a sixth died on the fourth day from disease of the kidneys. Of the thirteen who escaped death, one had a recurrence within eighteen months, one in one year, two in seven months, one in six months, three in two months, one was well at the end of the eleventh month, one no report, and the remaining three (two of four months and one of three weeks) were too recent to report as to relapse.

I allude to the work of these operators as I might to that of many others both here and abroad, first, to emphasize the fact that though experience and skill are essential in hysterectomy, as in all grave surgical operations, they are not the only factors to be considered in determining or accounting for results, and, secondly, as a corollary, comparatively indifferent operators may have and as a matter of fact are constantly having "runs of luck" which, so far as regards cause and effect, may bear no logical relation whatever, either to the merits of the surgeon, the work performed, or even its advisability. As to why such experienced operators as Olshausen, Fritsch, Martin, Hoffmeir, Schroeder and Gusserow should have a primary mortality of from ten to twenty per cent., or an average for each of over fifteen, while Kaltenbach claims but two-and-a-half per cent., and Leopold only five, is a problem which I leave to others to solve or explain, for I cannot on any rational grounds, and I doubt very much if any of the gentlemen named put much faith in the operation of a special Providence.

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[3] Dr Polk.

[4] H. C. Coe, *American Journal of Obstetrics*, 1890, pages 587–599.

The advocates of vaginal hysterectomy for cancer would, I presume, indignantly resent a charge so grave as that of misstating or misrepresenting facts, suppressing evidence which might conflict with preconceived notions, or attempting to belittle or ignore any rational measure for the alleviation of human suffering or the prolongation of life. Nevertheless, while advocating and practicing extreme surgical measures, to the defects of which they would seem to be invincibly blind, they persist in displaying an unworthy and unbecoming spirit of intolerance and a lofty contempt for their more conservative brethren, of whom it is not unusual for them to speak as being "behind the age." In no one direction has this unfair and illiberal spirit been so strikingly manifested as in the manner in which this radical element, both here and abroad, has disregarded a means of treating uterine cancer which, while it may be considered absolutely free from danger, has secured for the sufferer a period of exemption from relapse far beyond and in startling contrast to that of hysterectomy. In their struggle for pleas to justify hysterectomy they set up the operation of high amputation, as practiced by Schroeder and others, as the main target for their criticism. In this one particular at least, I have no disposition to take issue with them, because as between these two operations, whether as regards safety or utility, there is but little choice. Therefore, when an enthusiastic advocate of hysterectomy[5] declares that "to his mind there is absolutely no place for high amputation of the cervix in cancer of the womb;" and, moreover, "*as compared with vaginal hysterectomy, it is more difficult, more dangerous and more unreliable,*" I am almost inclined to agree with him, so far at least as regards its comparative worthlessness as a curative measure for uterine cancer. And yet, if Landers' statistics of high amputation of the cervix performed in the ordinary way are to be relied upon, and twenty-seven out of a hundred-and-five patients so treated were living at the expiration of four years, criticism as to its utility comes with a very bad grace from the advocates of total ablation, as it much exceeds the best of their own records, as far as I have been able to discover. More than this, Winter says, that according to his observations after high amputation thirty-eight per cent. were well after two years, and twenty-six-and-a-half per cent. had no recurrence five years after operation. He also states that the mortality after high amputation at the Berlin Klinik (in 155 cases) previous to 1884 was but six-and-a-half per cent., against eight and nine per cent. obtained by combining the operations of Olshausen, Schauta, Fritsch, Kaltenbach, Leopold and Gusserow.[6]

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[5] Dr. Krug.

He, Winter, also gives publicity to a most extraordinary statement attributed to Fritsch, to the effect that he (Fritsch) has noted thirty-six per cent. of *cures* at the end of five years after hysterectomy, and Hoffmeir, thirty-three per cent. at the end of four years.

When we come to examine the statistics in detail it will be found, I think, impossible to reconcile this statement with any data thus far obtainable.

Again, Dr. Coe quotes Hoffmeir as stating that he has performed fifty vaginal hysterectomies with six deaths, against thirty-three amputations with one death, and he affirms that the radical operation gives no better ultimate results.[7] It is well to remark in this connection that there is good reason to surmise that Hoffmeir's amputations were by the galvano-cautery loop, which was his method of operating previous to embarking in hysterectomy.

As to the published transactions of some of our societies, so prolific of daring exploits in pelvic surgery; the graphic descriptions of blood-curdling operations; the number of women, who, through the interposition of Divine Providence, are reported to have escaped death after hysterectomy and therefore "*cured*"; and the elaborate papers, loaded with bibliographical excerpts, usually exotic and supposed to signify deep research on the part of their authors; to see all this, I say, one would imagine that any proceeding short of complete pelvic evisceration had long since ceased to be worthy of the slightest consideration. In the most protracted discussions there is found to be a remarkable silence regarding any and every other means than one of combating uterine cancer, unless it be to condemn or ridicule, as stale and unfit pabulum for our modern gynæcological knights-errant. If, perchance, owing to exhausted material, or a desire on the part of some more conservative member to vary the sanguinary monotony of the proceedings, he should have the temerity to suggest partial ablation for uterine cancer, incredulity or cold indifference at once takes the place of enthusiasm and mutual admiration. He may be confronted with the gratuitous assertion that in their later campaigns, in figuring up the killed and maimed, the number of the former has been reduced to five per cent., with the hopeful prediction that it may become less in the future. Or, again, he may be met with some such extraordinary statement as that attributed to one of our own Fellows in discussing Dr. Janvrin's paper on hysterectomy, and which I hope is a misprint, namely, that "according to recent statistics, ten to fifteen per cent. remained free from a return of the disease eight or nine years after the operation."[8] Now, admitting that the usually ambiguous statistics of hysterectomy may be made wonderfully accommodating by a little effort, let me remark just here, and I speak whereof I know, that unless in a very few and exceptionally rare instances, and which being subject to the law of all rules, can have no logical application to the question involved, there is not to be found in the statistics of hysterectomy of any country or language, the slightest warrant for either statement. It is customary for gentlemen to supplement assertions like these by quoting the tables of Leopold or Kaltenbach, one with a primary mortality of three-and-a-half, and the other of five per cent. Such phenomenal results can have but little weight when contrasted with the experience of the host of equally able and expert operators, as Fritsch, Olshausen, Martin, Schroeder, Hoffmeir, Gusserow, and others. In fact they are but examples of happy coincidences and hair-breadth escapes, with which the history of medicine and surgery is so replete, and the same remark applies with still greater force to "runs of success" in the work of less pretentious exploiters, as when five, ten, or even twenty consecutive recoveries are reported and duly chronicled as "*cures*."

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[6] *Berlin. klin. Woch.*, 1891, No. 22. It will be noticed that the operations of Martin, Hofmeir, Schroeder and others are excluded from this estimate—unintentionally, of course.

[7] "The Limits of Vaginal Hysterectomy for Cancer of the Uterus," by H. C. Coe, M.D., *N. Y. Journ. of Obstet.* 1890, p. 597.

Another advanced gynæcologist, and one withal for whom personally I entertain a high regard, in exhibiting one of the trophies of his skill a few months ago, said: "The patient had begun to bleed, and I found a little growth as large as a filbert, which I snipped off and examined. It proved to be malignant, and I removed the whole uterus. I have put myself on record in favor of the total removal of the uterus whenever cancer is discovered and proved to exist. When in 1885 this idea was expressed to me by Martin it seemed like a *shocking doctrine*, but when I saw these cases relapse after removal of the cervix alone, I decided always to cut as far from a cancer as possible."[9]

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[8] Dr. Geo. T. Harrison.

In the light of my own experience and with some knowledge of gynæcological history, *unwritten* as well as recorded, I must say it is hard to find words sufficiently expressive of my horror at the advocacy of this truly "shocking doctrine," and my unqualified disapproval of the fruits of its pernicious teaching. As to the cases known to "relapse after removal of the cervix alone," I have only to remark that such experience though sad, was no worse and no better than that of Schroeder and others, who still adhere to his methods, though as already remarked, an operation which, according to the statement of a pronounced advocate of hysterectomy, has afforded over two years to thirty-eight per cent. of cases operated upon, and five years to twenty-six-and-a-half per cent., should not be so summarily denounced. Moreover, gentlemen, they cannot possibly be ignorant as to the splendid results obtained by Dr. Baker through high amputation and subsequent cauterization. The truth is, the luckless subjects of amputation referred to, were, in all probability, denied the benefit of better treatment in obedience to the dictum of foreign authorities and obsolete methods. *Indeed, I cannot but feel that if, in the last decade particularly, these and all similarly afflicted women had been subjected to an operation whose greatest drawback would seem to be that it had been perfected, practiced and described nearer home, and for over twenty years, the results might have been different, and there would have been fewer pretexts for putting into practice any "shocking doctrine."*

In this connection may be noticed another specimen of "shocking doctrine," though really unworthy of serious comment. Some of our transatlantic masters not to be outdone in the advocacy of "shocking doctrines" have recommended, and, indeed, in quite a number of cases, resorted to the removal of a large portion of the pelvic basin, so as to attack the doomed uterus *a posteriori.* Who knows what the brilliant surgical engineer who originated this formidable method of attacking nature's heretofore impregnable defence, if still in the flesh, may next suggest—probably the removal of the pubic arch, preparatory to excision of the bladder for cancer of that viscus. He might attempt to justify such a proceeding on the theory of the conservation, or rather transformation, of natural and providential resources. The ureters, for example, might be inserted into the rectum, and thus compensate for the loss of a disabled bladder by furnishing a perpetual enema. This would thoroughly annihilate constipation, so often a sore trial to defæcating humanity.

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[9] Dr. E. W. Cushing in *Annals of Gynæcology*, vol. v., p. 553.

But let us now see what are the facts regarding the work at the Dresden Klinik, and of which we hear so much now-a-days.

Edward Leisse, (*Archiv. f. Gynæk.*, Berlin, 1891, xl., p. 261-65. Vaginal hysterectomy for cancer at Women's Klinik, Dresden,) says:

From October 11, 1883 to May 9, 1889, there were eighty cases, of which forty-five were living and thirty-five dead, or 43.75 per cent. Of the deaths directly due to the operation one was from sepsis; one was from peritonitis; one was from heart failure; one was from intestinal obstruction; a fifth was from exhaustion; one died from phthisis; two died from insanity. Noted as died, but neither date nor cause of death stated, twenty-seven. Total, 35.

Of the condition of the forty-five patients who were living at the date of report:

2	were	free from	recurrence	after	7	years.
3	"	"	"	"	6	"
12	"	"	"	"	5	"
7	"	"	"	"	4	"
9	"	"	"	"	3	"
9	"	"	"	"	2	"
3	"	"	"	"	1	"
45						

In this table I notice that the word "died" appears twenty-eight times without any further explanation, and "no recurrence," or "well" forty-six times, which with the eight deaths above noted, brings the number up to eighty-two. However, as in the less complicated statistics of my own operations, I have discovered in simple addition an error of three, (but against me), I need say nothing.

It will be observed by this report that while death has been caused or hastened in a large number, 43.75 per cent., forty-five patients only out of eighty being alive at the expiration of two years, we have an *aggregate* exemption from recurrence of 168 years, or precisely three years, eight months and twenty-four days for each. I doubt very much if this brief period of exemption would greatly, if at all, exceed the duration of life in most cases of cancer of the uterus, if allowed to go untreated.

But, mark the extraordinary manner in which the compiler of these statistics sums up his tables:

He says of 80 cases operated upon

45 lived 2 years.
34 " 3 "
25 " 4 "
18 " 5 "
6 " 6 "
2 " 7 "

Thus presenting an array of figures so attractively linked together as to convey the idea that some large but indefinite number were made whole through the beneficent agency of hysterectomy.

Let us now see what Munchmeyer has to say regarding these same eighty cases, in his report of 1890. He had already reported forty-eight of the eighty cases, in the *Leipzig Journal*, vol. xxx, and states that six were "cured."[10] He now (1890) reports sixty-two more, making in all 110 cases of vaginal hysterectomy from October 11, 1883 to May 9, 1889. Eighty of these were for cancer, including two for sarcoma. Of the eighty, four died from the operation and seventy-six survived. Of the seventy-six, fourteen died later, leaving sixty-two. Of the fourteen deaths, ten were recurrences, one from consumption, two insanity, and one from heart failure. Of the sixty-two, three showed recurrence—probably rapid; of the forty-two (of his first series of forty-eight, *i.e.*, from October, 1883 to May, 1887, which he had previously reported as "cured,") the following summary is given:

1 was well after 5½ years.
2 were well " 4½ "
2 " " 4¼ "
3 " " 3¾ "
1 " " 3½ "
6 " " 3¼ "
2 " " 3 "

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[10] *Archiv f. Gynæk.*, Berlin, 1889, xxxvi., pp. 424–459. Also, Verhaud *Deutsche Gesel. f. Gynæk.*, 1890, pp. 298–310.

3 were well after $2\frac{3}{4}$ years.
2 " " $2\frac{1}{2}$ "
2 " " $2\frac{1}{4}$ "
3 " " 2 "
3 " " $1\frac{1}{2}$ "
3 " " $1\frac{1}{4}$ "
4 " " $1\frac{1}{4}$ "
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37

"Therefore," he says, "forty-two lived longer than two years, and of these, twenty-seven were free from recurrence."

Now, inasmuch as the list falls short by five cases, and ten have had an exemption of but little over one year, it is past my comprehension to understand how forty-two could have been cured more than two years.

This, however, is but one of the many mysterious features of statistical construction. To sum up:

Munchmeyer says there were twelve patients who were free from recurrence after three years.

Leisse says there were only nine.

Munchmeyer says there were but four from four-and-a-quarter to four-and-a-half years.

Leisse says there were seven over four years.

Munchmeyer says there was but one after five years.

Leisse says there were no less than twelve.

Munchmeyer records none after five-and-a-half years.

Leisse says there were three.

Of the second series of thirty-eight cases operated upon from May 24, 1887 to May 9, 1889, all comparatively recent, he reports two primary deaths and one recurrence at one month; one at three months; one at eight months; one at nine months; two at twenty-one months; one "tolerably well." In all nine; twenty-seven being noted as recovered from the operation.

Some of the "cured" cases may possibly be included in Leisse's list between October 11, 1883 and May 10, 1885, as six of the ten cases operated upon during that period are noted by Leisse to have had no relapse for five years, eleven months and fifteen days, to seven years, three months and sixteen days. Thus thirty-seven patients out of eighty operated upon had an aggregate period of exemption from recurrence of one hundred years and three months, which gives to each an average of two years, eight months and fifteen days.

It cannot be denied but by reason of more mature experience and improved methods regarding the technique of hysterectomy, the primary mortality has been much reduced within the past four or five years, and that the statistics of Dr. Sarah Post, showing a mortality of twenty-four per cent., apply more particularly to a period anterior to 1888. And yet, if perfection in the technique of any operation cannot be attained after so many trials, of what practical value I would ask, are all these clinical efforts?

Let us then see how the case stands at the latest date. But, before proceeding further, I beg to call your attention to some of the many examples to be found of the manner in which the statistics of hysterectomy are being constantly distorted and misrepresented to suit the whims and prejudices of writers. Thus, a gentleman we all know and respect says:[11] "I am thoroughly convinced that the removal of the uterus per vaginam for cancer far surpasses in its *remote* or *permanent success* not only all other operations for cancer of the womb, but also all operations for cancer in other parts of the body." This opinion is substantiated by the remarkable statistics of the Dresden Klinik. And how think you that he summarizes these said statistics? He says: "The following are the facts; of eighty patients examined over two years after the operation, forty-five were free from recurrence; 58.6 per cent. (of fifty-eight patients examined) were well after three years; 59.5 per cent. (of forty-two) after four years; 60 per cent. (of thirty) after five years; 66.6 per cent. (of nine) after six years; and the two patients that had survived the operation for seven years were perfectly well." This is another example of the many and marvellous statistical contortions which it is found expedient to offer in lieu of plain and intelligible "*facts.*"

In this connection also, it is impossible to overlook the remarkable statement of authors who in one page "*favor the removal of the entire organ by the vagina, even in cases of cancerous disease of the cervix alone, rather than take the chances of a high amputation of the cervix, when possibly the disease has already extended beyond the internal os,*" and in the very next approve of amputation, *provided the operator's line of incision has gone through entirely healthy tissues, when he should reasonably expect to have effected a permanent cure.*"[12]

In this, one of the very latest and not least pretentious works on the diseases of women, we find Leopold's table of eighty hysterectomies, of which four died from the operation, ten from quick relapse, and four from other causes, leaving sixty-two to be accounted for, thus analyzed and authoritatively disposed of, for the edification and guidance of its readers: "*Of the sixty-two still surviving three only have been attacked by a recurrence; the others are "cured;" the time since the operation varying from five-and-a-half years to one year and three months.*" Thus fifty-nine are supposed to be accounted for, and yet he says:

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[11] Dr. Goodell in *Med. News*, Dec. 5, 1891, p. 641.

[12] Thomas and Mundé, "Diseases of Women." p. 588–89.

"*Of seventy-six patients remaining under observation after recovery, there were free from recurrence*:

At 5½ years	3		At 2½ years	2
4¼ "	2		2¼ "	2
3¾ "	3		2 "	3
3½ "	1		1½ "	3
3¼ "	6		1¼ "	3
3 "	2		Below 1¼ "	4
2¾ "	3			

In all thirty-seven cases, the trifling number of twenty-two not being worthy of consideration!! Finally, and as if to emphasize his admiration for results so phenomenal, that "*one cannot ask for much better*," he winds up this extraordinary feat in arithmetic by informing his readers that "*it will thus be seen that seventy-two of these seventy-six cases were still well without recurrence of the disease from one to five-and-a-half years after the operation!!*"

Elsewhere, in quoting Ott approvingly, with thirty operations and no deaths, Péan is also credited with twenty-five operations and no deaths; whereas, though I am not prepared to question the accuracy of Ott's tables, the truth is, Péan[13] has been charged with seven deaths in thirty-eight operations. So if the above statement be true, he must have had seven deaths in his later thirteen operations, of which, however, I have not been able to find any record.

Now what does the report of Ott show? Of the thirty cases tabulated, thirteen are recorded "uncertain."

Of non-recurrences one has had no recurrence for two years and two months; one for two years and one month; two for one year and one month; four for one year.

Of recurrences, one relapsed at thirteen months: one at eleven months; one at ten months; one at nine months; one at five months; two at three months; two at one month. Total nine.

So out of the entire thirty successful (?) operations two only are reported to have escaped death or recurrence for over two years.

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[13] Binne, *Weekly Med. Review*, St. Louis, xxiv, 1891, p. 201–4.

while each of the seventeen cases accounted for has been blest with an average period of exemption from recurrence of eight months and fourteen days. Would it not occur to anyone of ordinary observation or experience that these patients might and doubtless would have lived much longer and suffered much less if their earthly career had ended before the advent of advanced gynæcology? Is it not an insult to the intelligence of the profession to be told by anyone aspiring to authorship that reckless clinical work like this should be commended or accepted as proof of the blessings in store for suffering women through the beneficent agency of hysterectomy?

Before proceeding further, let me call your attention to that other and safer method of treating uterine cancer, to which I have alluded—

GALVANO-CAUTERY.

During a quarter of a century or more following the introduction of electro-cauterization by Middledorpf, of Breslau, though the practice was then attended with much difficulty, owing to imperfect apparatus, yet its peculiar advantages over destructive chemical agents in the treatment of uterine cancer had been repeatedly demonstrated. Indeed, it may be said that up to 1880, or thereabouts, the choice of proceeding lay between this and high amputation of the cervix by scalpel or scissors, as practiced by Schroeder, and adopted by others even to the present day. This latter surgical measure having soon fallen into merited disrepute, and the difficulties at first found to attend the practice of electro-cautery not yet having been overcome, the time seemed ripe for the introduction and advocacy of the more unsparing and admittedly more dangerous operation of total extirpation of the uterus. It may be well here to note that during all this time, *i.e.*, since the introduction of galvano-cautery, and even up to the present day, while the number of those who have given this last-named method a fair and practical trial may be enumerated on one's fingers, the more aggressively radical and too often inexperienced candidates for surgical notoriety, who during the last decade seem to have laid siege not only to the uterus but to the whole sexual apparatus, may be counted by the hundred.

Some years ago gynæcologists in New York and elsewhere attempted this method of operating in a limited number of cases, but they, like some modern authors who ought to know better, labored under the delusion that the entire practice of galvano-cautery consisted in looping a cervix, recently styled "linear amputation," or removing pedunculated tumors. In their clumsy and often abortive attempts to operate, they soon discovered that a galvanic battery did not possess the automatic qualities of a Swiss music-box; that the adaptation of this agent to the requirements of pelvic surgery demanded, in addition to operative dexterity, some patience and a very moderate but easily acquired knowledge of a subject not to be found in medical text-books. As this naturally involved some expenditure of time, money and grey matter, another discovery was not slow to be reached, though it has been kept a profound secret until lately. In fact it is nothing more nor less than that the galvanic cautery is only applicable "*where the disease is of the cauliflower variety and entirely limited to the intra-vaginal portion of the cervix.*"[14] As has been so often remarked regarding other great discoveries and inventions of subtle minds, one cannot help wondering how, and for so many years too, this valuable piece of information could have escaped the notice of such able workers in this field, as Hoffmeir, Powlack, Noeggerath, and others. But this is not all, for the writer referred to, probably fearing that he may have conceded too much, gravely informs us that "it has seemed to us that the stimulant action of heat tended at times to increase the rapidity of growths of the malignant disease."[15]

> " Now in the names of all the gods at once,
> Upon what meat doth this our Cæsar feed
> That he hath grown so great?"

It is safe to say, therefore, as I have stated repeatedly during the past twenty years, that as amputation of the cervix, high or low, is worse than useless without cauterization, and further, that it is an operation by no means free from danger, there are but two surgical measures worthy of mention to choose between at the present day. These are (1) high amputation, or excision, as the case may be, by *galvano-cautery*, not only of all diseased parts, but as much more and beyond the supposed danger-line as can be safely taken away, the same to be followed by a thorough *dry-roasting* of all exposed surfaces; or (2) vaginal hysterectomy, with its more attractive surgical glamour and ghastly record of lives shortened and often sacrificed on the altar of what is now-a-days mis-called "progressive gynæcology."

As to the electric cautery, though its claims to recognition are based on no inconsiderable number of carefully observed and duly recorded facts, covering a period of a quarter of a century, and to be found in the periodical literature of every civilized country, yet, strange as it may appear, comparatively few gynæcologists, in this country especially, have taken the trouble to know anything whatever about it practically, and fewer still have conducted such operations in a proper manner, or to an extent sufficient to warrant any opinion as to its real merits. Thus, I have known an instance of a patient having been operated upon before a class of students, in the following manner (not in Brooklyn, however): the vaginal portion of the cervix having been removed by the cautery loop, the uterine cavity was then curetted, but in so rough a manner as to induce copious hæmorrhage; the bleeding parts were then subjected to a stewing process by a thermo-cautery, a tampon applied, and the patient soon after transferred in a carriage a considerable distance to a hotel. Need it be wondered at that she died from hæmorrhage within twenty-four hours. This is but one of many equally inexcusable and criminal blunders which have come to my knowledge from time to time, and thus between the arrogance and skepticism of those who are ever ready to condemn what they have never even tried to understand, and the opposition of others who have demonstrated their own incapacity, galvano-cautery may be said to have had a hard fight for recognition.

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[14] Thomas and Mundé, p. 581.

[15] Ibid. p. 594.

As one who has earned the right to speak I claim for this method of treating uterine cancer two most important advantages: (1) absolute freedom from danger, immediate or remote, and (2) a longer respite from recurrence of the disease than has yet been shown by the most favorable and ingeniously constructed statistics of hysterectomy. *For example, in nearly four hundred cases not a single death due to the operation; in forty out of sixty-three cases of cancer of the portio vaginalis, twenty-three having strayed away, periods of exemption ranging from two to twenty-two years, being an average for each one of over nine years. Of eighty-one cases involving the entire cervix, —thirty-one were lost sight of, ten relapsed within two years, five had no recurrence for two years, eleven for three years, six for four years, eight for five years, six for seven years, two for eleven years, one for thirteen years, and one for seventeen years. So of forty of this class whose histories could be followed up, there was an average period of exemption for each of nearly six years.* And yet, these figures are not up to date by any means, because, many of the patients of this class, five at least to my personal knowledge, and now residing in this city, are entitled to an additional credit of three to four years.[16]

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[16] "A Digest of Twenty Years Experience in the Treatment of Uterine Cancer by Galvano-Cautery," by John Byrne, M.D., *Trans. Amer. Gynæcological Soc.*, vol. xiv., p. 91.

Let us disregard for the present the benefits proved to have been derived from galvano-cautery in those desperate and utterly hopeless cases of extensive cancerous destruction of the uterus, which even a hysterectomist would abandon, and which constitute the vast majority of all cases brought to our notice. With regard to the question of primary danger attending hysterectomy it would be irrelevant folly to quote either the history or the statistics of ovariotomy in support of the former. There is no comparison between the two operations, especially as regards that which should be the main object of all surgical procedures, namely, a more or less complete restoration to health, or, at the very least, a prolongation of life commensurate with the risk involved.

The only question then worthy of serious consideration in this very serious business, so far at least as the ill-fated victims of cancer are concerned, is as to which of the two operations, vaginal hysterectomy, or that of which the above epitomized record speaks, can be said to hold out to the afflicted the greater benefits, immediate and prospective.

So far as the question of primary mortality is concerned, we will find on further statistical research, that the tables of the Dresden Klinik, the glory and boast of our radical brethren, present in this one respect a phenomenal experience merely, and, consequently, to accept such results as a basis for generalization would be "a mockery, a delusion, and a snare." But were it otherwise, and if the success of every hysterectomist, past, present and to come, equalled that of Kaltenbach or Leopold, there would still remain to be seriously considered, and if possible settled, other questions of far-reaching import, namely: (1) Has vaginal hysterectomy for uterine cancer conferred upon the unhappy victims of this disease a sufficiently long respite from relapse to entitle it to a place in the list of justifiable operations? (2) In a large proportion of all cases thus far exposed to vaginal hysterectomy, has not suffering been increased and life greatly shortened through its agency? And (3) may not the relatively small proportion of prolonged non-recurrences be reasonably accounted for by possible errors in diagnosis, or what might be termed a *cacoethes operandi*, which could not resist the extirpation of an entire uterus though it should have but "*a little growth on the cervix the size of a filbert.*"

I repeat, my friends, these are questions which we are morally, and in the interest of humanity as well as true progress, bound to consider seriously and carefully, and with that view I would ask your attention to some further statistics.

Prof. Pozzi[17], an able, consistent, and yet impartial advocate of this and other radical measures, gives the following table touching mortality from hysterectomy previous to 1890:

Fritsch,	60 operations,	7 deaths.
Leopold,	42 “	4 “
Olshausen,	47 “	12 “
Schroeder and Hoffmeir,	74 “	12 “
Staude,	22 “	1 “
A. Martin,	66 “	11 “
	311	47 or about 15 per cent.

E. Boerner (Graz) *Wien. klin. Woch.* 1889, ii. page 272–4, quotes :—

Martin,	66 operations,	11 deaths.
Fritsch,	63 “	7 “
Schroeder,	60 “	12 “
Leopold,	44 “	3 “
Hoffmeir,	42 “	4 “
	275	37 or about 13½— per cent.

Martin in combining operations of Fritsch, Leopold, Olshausen, Schroeder, Hoffmeir, Staude and his own, gives a mortality of fifteen per cent. And with regard to recurrences Martin has stated that out of 214 women operated upon *successfully* by Leopold, Schroeder, Fritsch and himself, only five were living at the end of four years.[18]

Gusserow[19] reports sixty-seven operations from 1883 to 1891, sixty-four by himself and three in his absence—seven deaths from operation; ten of the operations having been done within six months he considered too recent for argument, but well at time of report. Of the remaining fifty, sixteen are living, twelve are dead of recurrence—one at three years, four from one year to eighteen months, and seven from four to seven months. Of the sixteen living :—

1	well,	8	years		after operation.
1	“	4½	“		“ “
1	“	3	“	2 mos.	“ “

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[17] Pozzi, Paris Edition, 1890, p. 405.

[18] Dr Coe.

[19] *Berlin. klin. Woch.*, 1891, xxvii. also in *Centralb. f. Aertz. Œst. Ungarn.*, 1891, vol. i., p. 207.

1 well, 3 years after operation. Deaths, 11 per cent.
5 “ 2 “ to 27 mos. “ “
6 “ 1 “ “ 19 “ “ “
1 “ 8 mos. “ “

Average respite to each of the sixteen, less than two years; and three only have reached a period over three years without recurrence.

S. S. Zayaitzki, *Med. Oboz.*, Moscow, 1890, xxxiv., p. 381 to 427, reports sixty-five hysterectomies from June 22, 1883 to February 15, 1890, with nineteen deaths from the operation or nearly thirty per cent., but gives no particulars except in the first seventeen cases, *i.e.*, June 22, 1883 to Dec. 1, 1885. Of these seventeen operations there were seven deaths from operation, five were lost sight of, and as to the other five:—

1 had no relapse for 7 years.
1 “ “ “ “ 5 “ and 7 months.
1 “ “ “ “ 1 year.
1 “ “ “ “ 4 months.
1 “ “ “ “ “a few months.”

As to the forty-eight operations between February 7, 1886, and February 15, 1890, nothing is stated regarding recurrence, except that it was “rapid” in four cases, and but two primary deaths are admitted, one from peritonitis, and one from heart-failure[20], though elsewhere he acknowledges, as above stated, no less than nineteen deaths from the operation or a primary mortality of thirty per cent. In forty-two noted as “recovered,” we are left to conclude that these patients survived the operation and its immediate consequences. However this may be, if the history of these forty-two cases should have turned out to be anything like that of the first seventeen, such experience could hardly be advanced as an argument in favor of hysterectomy for uterine cancer.

ROSSIER'S REPORT.[21]

Of twenty-five cases from June 30, 1887, to December 29, 1891.

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[20] Zayaitzki, *Med. Oboz.*, Moscow 1890, xxxiv., p. 381–427. Note the inconsistency, thus: If seven died in the first seventeen operations and there were nineteen deaths in all there must have been twelve primary deaths in these forty-eight cases.

[21] G. Rossier *Correspbl. Schweiz Aerzt.*, 1892, xxii., p. 202–212. Woman's Klinik, Basel.

2	relapsed	within	15	months.
6	“	“	11	“
1	“	“	6	“
1	“	“	5	“
2	“	“	4	“
—				
12				

Hoche's[22] table of 150 hysterectomies refers to relapses as follows:—

At the end of three months five were lost to sight, twenty-three had relapsed, and 122 had shown no symptoms of relapse.

At the end of	6 mos.	6 lost sight of,	20 relapsed or dead	96 no relapse
“ “ “ “	9 “	5 “ “ “	10 “ “ “	81 “ “
“ “ “ “	12 “	2 “ “ “	9 “ “ “	70 “ “
“ “ “ “	18 “	10 “ “ “	8 “ “ “	52 “ “
“ “ “ “	2 yrs.	14 “ “ “	0 “ “ “	38 “ “
“ “ “ “	3 “	21 “ “ “	0 “ “ “	17 “ “
“ “ “ “	4 “	10 “ “ “	1 “ “ “	6 “ “

Thus at the end of eighteen months, seventy or about forty-seven per cent. of the whole were known to have relapsed, and at the expiration of four years there remained, so far as is known, but six without relapse or four per cent. of the whole !

N. Flaischlen,[23] reports twenty hysterectomies; thirteen of which were by Paul Ruge, between December 6, 1884 and March 6, 1890, with three deaths, or fifteen per cent.

Phenomenof, Vrach, St. Petersburg, 1890, xi., p. 1015, 1049 and 1072, records twenty-three operations from January 1886 to May 1890 with three deaths, or thirteen per cent.

L. C. Richelot, *Bull. Med. Chir. Soc.* Paris 1891, xvii, p. 617, in a discussion on vaginal hysterectomy, quotes eighty-six operations by eight operators, with twenty-nine deaths, as follows:

Kirmasson	3 operations,	2 deaths.
Polaillon	6 “	2 “

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[22] Pozzi, p. 408.

[23] *Deutsch. med. Woch.*, 1890, xvi. p. 632, July, 1890.

Marchand	7	operations,	4	deaths.	
Monod	2	"	2	"	
Berger	2	"	2	"	
Bouilly	21	"	4	"	
Richelot	24	"	9	"	
Terrier	21	"	4	"	
	—		—		
	86		29		or 23.7 per cent.

Paul Ségond, page 688 as above, reported thirty-three hysterectomies and seven deaths, or over twenty-one per cent. Terrier thirty four hysterectomies and eight deaths, or over twenty-three per cent.

Krukenberg[24] reports 235 vaginal hysterectomies by various operators from May 1, 1880 to April, 1891, of which he tabulates 130 as follows, viz.: in 102 the operation was for cancer of the cervix, and in twenty-eight the fundus was the seat of the disease. Of the first, sixty-three had no recurrence for periods ranging from two to eight years, and in thirty-nine recurrence took place in from one to two years; one died from pneumonia, and two operated upon in April, 1891 are noted as recovered. In this report 105 cases are not accounted for, and it is to be presumed that these represent deaths from the operation and quick relapses.

Moreover, this table being made up of a few selected cases from the record of each of a number of leading operators can hardly be accepted as a safe basis for generalizing as to the period of exemption obtainable by vaginal hysterectomy. For instance, the sixty-three operations selected by Krukenberg out of 130 consisted of twenty-three by Olshausen, eleven by Hoffmeir, ten by Thorn, six by Schroeder, six by Winter, four by Kramer, one by Cohn, one by Bencheiser, and one by Reichel; in all sixty-three.

Of the twenty-eight cases operated upon for cancer of the fundus, no less than seven died the first year from recurrence, but strange to say, not a single primary death is recorded, the table being constructed apparently to show periods of exemption only. The period covered for these twenty-eight cases was from December 1885 to April, 1891.

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[24] *Zeitsch. f. Geburts. und Gynæk,*, 1892, xxiii., p. 94–158. University Woman's Klin., Berlin.

OLSHAUSEN'S NON-RECURRENCES.

Date Operation.	Date of Report.	Respite.	Remarks.
May 11, 1887.	Aug. 1, 1891.	4 yrs. 3 mos.	Cancer of vertebra.
" " "	Oct. 21, "	4 " 5 "	
June 8, "	June "	4 "	
" 15, "	May 6, 1890.	2 " 11 mos.	Recurrence in scar.
" 22, "	July 29, 1891.	4 " 1 "	
" 13, "	" 20, "	4 " 1 "	
July 25, "	" 9, "	4 "	
Aug. 6, "	" 28, "	4 "	
Sept. 15, "	" 7, "	3 " 10 mos.	
Nov. 23, "	" 9, "	3 " 8 "	
Dec. 2, "	" 7, "	3 " 6 "	
Jan. 12, 1888.	" 27, "	3 " 6 "	
Feb. 14, "	" 7, "	3 " 3 "	
May 7, "	June 29, "	3 "	
" 30, "	July 28, "	3 " 2 "	
" 30, "	Aug. 25, "	3 " 2 "	
Nov. 5, "	July 11, "	2 " 8 "	
Dec. 20, "	June 5, 1890.	1 " 6 "	
Jan. 10, 1889	July 21, 1891.	2 " 6 "	
Feb. 4, "	" 7, "	2 " 5 "	
" 5, "	May 22, 1890.	1 " 3 "	
March 12, "	June 22, 1891.	2 " 3 "	
July 19, "	July 25, "	2 "	

Seven over four years; eight over three years; six over 2 years; two over one year. Total twenty-three.

HOFFMEIR'S CASES.

Date Operation.	Date of Report.	Exemption.	
1. Apl. 8, 1883.	Oct. 1888.	4 yrs. rec.	Died 5th year—
2. June 24, "	June 1891.	8 "	Recurrence.
3. Sept. 19, 1885.	" "	6 "	
4. Apl. 10, 1886.	July 20, "	5 "	
5. Aug. 9, "	" 20, "	5 "	
6. " 16, "	Aug. 15, "	5 "	
7. Feby. 3, 1887.	June "	4 "	
8. " 13, "	" "	4 "	
9. Apl. 6, "	March 4, "	3 "	Died of recurrence.
10. " 16, "	June "	4 "	
11. " 20, "	" "	4 "	

One over eight years; one over six years; three over five years; five over four years; one over three years. Total, eleven.

THORN'S CASES.

DATE OPERATION.	DATE OF REPORT.	EXEMPTION.
1. June 24, 1887.	July 5, 1889	8 years
2. " 11, "	" 2, 1891.	4 "
3. " 21, "	Apl. 25, "	4 "
4. Aug. 24, "	Aug. 7, "	4 "
5. Oct. 20, "	" 14, "	3 " 9 mos.
6. " 3, "	July 9, "	3 " 9 "
7. Nov. 17, "	" 30, "	3 " 8 "
8. Dec. 29, "	" 11, "	3 " 8 "
9. Jany. 20, "	Aug. 10, "	2 " 6 " [25]
10. " 23. "	July 8. "	3 " 6 "

Three over four years; five over three years; two over two years. Total, ten.

SCHROEDER'S CASES.

DATE OPERATION.	DATE OF REPORT.	EXEMPTION.
1. May 1880.	May 1884.	4 years. Died of Apoplexy.
2. Jany. 1881.	Feby. 5, 1884.	3 "
3. Dec. 1883.	Dec. 1885.	2 "
4. May 27, 1884.	June 1891.	7 "
5. Oct. 17, 1885.	" "	5 " 8 mos.
6. May 6, 1886.	July "	5 " 2 "

One over seven years; two over five years; one over four years; one over three years; one over two years. Total, six.

WINTER'S CASES.

DATE OPERATION.	DATE OF REPORT.	EXEMPTION.
1. March 26, 1886.	June 1891.	5 yrs. 3 mos.
2. May 24, 1889.	May "	2 "
3. June 14, "	June 22, "	2 "
4. July 6, "	July 4, "	2 "
5. " 17, "	" 30, "	2 "
6. " 24, "	" 7, "	2 "

One over five years; five over two years. Total, six.

KRAMER'S CASES.

DATE OPERATION.	DATE OF REPORT.	EXEMPTION.
Dec. 6, 1888.	Aug. 4, 1891.	2 yrs. 8 mos.
Jany. 18, 1889.	July 4, "	2 " 6 " 4 over 2 years.
March 23, "	" 7, "	2 " 4 "
Apl. 4, "	June 28, "	2 " 2 "

Cohn, one case 1887; recurred 1890; two years exempt.

Bencheiser, one case; four years; no recurrence.

Reichel, one case; five years, no recurrence. In all sixty-three cases

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[25] Recurrence observed in August.

In summing up these tables we will observe that

1	case out of 235	operated upon	had no recurrence for over	8	years.
1	"	"	"	7	"
1	"	"	"	6	"
7	"	"	"	5	"
17	"	"	"	4	"
15	"	"	"	3	"
19	"	"	"	2	"
2	"	"	"	1	"

So, these 63 patients, being but 27 per cent. of the whole, had an average exemption from relapse of three years and four months for each, while nothing whatever is said as to the fate of 172 or 73 per cent. of the entire number operated upon. If we take into account the probable history of these 172 less fortunate sufferers, and I do not see why we should not, and allow one year for each, we have an aggregate of 381 years exemption for 235 patients, or 1 year, 7 months and thirteen days for each.

Olshausen reported at the International Congress in Berlin, in 1890, 163 cases of hysterectomy for cancer at the University Woman's Klinik from May 1, 1887 to May 1, 1890—twenty-two or 13.5 per cent. died. After two years forty were living, but of the entire number who escaped death in the operation (151) only nineteen of them were free from recurrence.

Of his earlier operations, thirty-nine in number, from April, 1881 to April 1887, six were then living and free from relapse. One after three-and-a-half years; one after four years; one after seven years; two after eight years, and one after nine years. In exhibiting the uterus taken from the last named patient he said, "this is the longest time that has elapsed after operation, without recurrence."

Thus in the space of three years no less than one hundred and sixty-three hysterectomies were performed in one institution, and at the expiration of two years there were but forty living, nineteen without recurrence and twenty-one doubtless much worse than if they had never run the gauntlet of hysterectomy.

Exhibits like these, and statistics are full of them, cannot be but discouraging to our advanced and exclusively modern gynæcologists. If like results were generally known to attend the treatment, medical or surgical, of any other malady, it were better that its victims should bear the ills they have, or trust to "the faith cure." In a business point of view it is certainly disheartening to the advocates of home industry in this particular line, and it behooves our radical advance-guards to look to their coveted laurels. Up to now, their best efforts have been put forward in scouring the country for material wherewith to break the record, and in some individual instances with considerable promise of success. Failure, however, if it should come, would be most disastrous; during their eager pursuit for notoriety, the whole business might become to say the least unpopular, each hysterectomist might find himself in the position of Shakspeare's swarthy Venetian: his first, second or third series of ten, fifty or one hundred operations, on paper, might spoil on his hands; or, like an off-style article of ladies' head-wear, become such a drug in the market that no amount of professional advertising would enable him to turn his wares to profitable account.

Per contra, Kaltenbach (Halle) tested the credulity of his audience at the same time by stating that he had but two deaths in eighty operations. A phenomenal experience truly, but an equally delusive and dangerous precedent, as the following tables will show.

NAME.	NUMBER OPERATIONS.	PRIMARY DEATHS.	PER CENT.
1. Olshausen	163	22	13.5
2. Kaltenbach	80	2	2.5
3. Leopold	80	4	5.
4. Martin[26]	134	22	16.5
5. Hoffmeir	42	4	9.5
6. Fritsch	63	7	11.
7. Schroeder	60	12	20.
8. Gusserow	67	7	10.5
9. Schauta	55	5	9.
10. Zayaitzki	65	19	29.
11. Bouilly	51	16	31.
12. Terrier	34	8	23.5
13. P. Ségond	33	7	21.
14. Sanger	17	2	11.8
	944	137	14.5

BRITISH OPERATIONS.

NAME	OPERATIONS.	PRIMARY DEATHS.
1. Sinclair	42	5
2. Purcell	11	4
3. Braithwaite	11	1
4. Murphy	1	1
5. Beaufoot	2	1
6. Cullingworth	4	1
7. Lawrabon	2	1
8. Nesbitt	1	1
	74	15, over 20 per cent.

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[26] Quoted by Ott, *Annals de Tocologie*, Paris, 1889, xxxii, pp. 241–271, and 327–334.

AMERICAN OPERATIONS.

NAME.	OPERATIONS.	DEATHS.
Price	53	3
Boldt	36	3
Cushing	38	4
Coe and Hunter	19	5
Byford, Martin and Nelson	20	1
Krug	7	1
Reamy	12	2
Wylie	20	1
Eastman	13	3
Reed	11	3
Polk	16	4
Montgomery	6	1
Winning	4	3
16 operators.	255	34, over 13 per cent.

	OPERATORS.	OPERATIONS.	DEATHS.	PER CENT.
European (continental)	14	944	137	14.5
British	8	74	15	20.
United States	16	255	34	13.
Total	38	1273	186	14.6

Further comment on these statistics, even did time permit, would seem to be uncalled for. They speak for themselves, and, in my opinion, so emphatically, that "they who run may read."

The lessons which they teach are plain and of vital importance, and the following *conclusions*, in part essentially those arrived at by Dr. Jackson five years ago, would seem to me to be fully substantiated by the array of glaring though distorted clinical facts here presented.

1. *The ambiguous manner in which the statistical tables of vaginal hysterectomy have been constructed, is so misleading and, in some instances so suggestive of erroneous inferences as to render their compilers open to a charge of SUPPRESSIO VERI or SUGGESTIO FALSI.*

2. *Any operation known to be attended or followed by an average primary mortality of over fourteen per cent. in the hands of the most experienced surgeons, is a grave and a dangerous one, and demands for its justification a large percentage of PERMANENT CURES.*

3. *The frequency and rapidity with which recurrence takes place after vaginal hysterectomy for cancer, even when the disease has ap-*

peared to be limited and circumscribed, prove conclusively that it can lay no just claim to this essential feature.

4. *As the average period of life in cancer of the uterus, when not operated upon, is not less than two years but often more, suffering has not been lessened but aggravated, and life has not been prolonged but shortened, in the vast majority of all cases thus far subjected to vaginal hysterectomy.*

5. *As in twenty-eight cases of vaginal hysterectomy for cancer of the fundus at the Berlin Klinik, no less than seven died from recurrence within twelve months, the regional grounds on which some have conconceded to this operation even a limited field are inconsistent with facts, and therefore not tenable.*

6. *As the operation is, in many respects, more dangerous than the disease for which it is undertaken, and, as the majority of all patients afflicted with uterine cancer would live longer without than with it, it is not a safe nor a useful operation and as such is unjustifiable.*

7. *On several occasions during the past twenty years, and more particularly in a paper read before this society three years ago, ample and convincing proof, clinical and statistical, was presented, as to the claims and unique characteristics of the electric cautery in the treatment of uterine cancer, and further observation has been more than confirmatory of opinions then advanced.*

8. *Amputation of a cancerous cervix by the cautery knife is free from danger, a safeguard against all infection, traumatic or septic, and, what is of still greater importance, it is destructive to latent cancer-cell proliferation in tissues far beyond the line of incision; hence, much more is comprised in the operation than the mere removal of a part or parts more actively involved in the work of destruction.*

9. *Any method of operating for which advantages so vital and so far-reaching can be claimed and established, and which thus distinguish it from all others, renders its adoption on the part of those who undertake to operate for cancer of the uterus no less than a MORAL OBLIGATION.*

I have often been asked to explain what at first thought appeared to be a transparent incongruity, namely, why better results should follow or be claimed for amputation of a cancerous cervix by galvano cautery, than for the same operation by other means, or, above all, the extirpation of the entire uterus by any of the methods ordinarily resorted to. At first I could do little more than to point to clinical facts and venture to surmise that coincident with either of the latter surgical procedures, there might take place a traumatic infection in parametric tissues, which, though apparently healthy, were, in all probability, already predisposed in some especial manner to pathological changes. Increased experience in the treatment of uterine cancer by galvano-cautery renders it more than probable that this will be found to be the only rational hypothesis, and one which is strongly fortified by clinical observation.

Moreover, I am of the opinion that in the parametric tissue of many cancerous uteri, and much beyond what might seem to be the limit of disease, there exist some morbid cell changes due to faulty nutrition, or cancer germs, but, in so undeveloped a state as to be inappreciable even by the aid of the most powerful microscope. Under such circumstances there is surely nothing unreasonable in surmising that cell proliferation, hitherto slow, or almost dormant, would be hastened, and that formative processes, so responsive to any kind of irritation, would be roused into active life through the traumatic stimulus of an operation, and the exposure of more or less extensive raw surfaces. On the other hand, in the progress of an amputation by cautery, and where the heated knife is so long, and repeatedly applied, (for such operations must be slow) the effects of the heat on outlying structures may be imagined by the shriveled and comparatively small size of what had been, before operation, a voluminous cervix. In no other manner do I think it possible to explain certain phenomena following these operations by galvano-cautery, e. g., (1) absence of fever and almost all pain, pelvic or peritoneal; (2) the almost universal immunity of the scar tissue after cauterization from secondary attack in the event of recurrence of the disease, and (3) in the case of relapse, the long respite obtained from reappearance of the disease in remote parts, even in the more unpromising cases of undoubted circum-uterine infiltration.

In conclusion, I feel that I owe you an apology for trespassing to so unusual a degree on your kindness and patience. My aim has been to arrive at some reasonable and truthful interpretation of the statistics of hysterectomy, and at the same time to urge the claims of a method of treating uterine cancer, which, I believe, has not received that consideration to which it has for many years been proved to be entitled.

It is a matter for regret, and a source of surprise to many, that while European authorities have not failed to chronicle from time to time certain facts connected with the treatment of uterine cancer by galvano-cautery, as observed and duly recorded in this country, some of our American authors, unmindful of their obligations, have assumed the responsibility of withholding from their readers almost everything of consequence connected with the subject. The caustic remarks of a medical friend in noticing this unaccountable omission, though severe, can hardly be said to be much out of place. He writes me as follows: "*Any author who wilfully sup-*

presses some of the most important facts in current literature, and bearing on a subject which he presumes to discuss, displays a reckless disregard for his own reputation, as well as for the opinions and rights of others.

"*The musty records of Braun and Schroeder may savor of ancient history, but if leavened with a passing reference to the more modern views of Reamy and Baker, just for appearance sake, the subject will have been dealt with in a sufficiently exhaustive manner to meet all reasonable demands of the American reader and the American market. 'O Tempora! O Mores!'*"

But, my friends, it is, I regret to say, the besetting passion of the time in society discussions, scientific papers, and even in more or less but usually more pretentious works, to so trade on the opinions of foreign writers, that it would seem as if gynæcology had forfeited its right to "a local habitation and a name," in this great republic of the west. Indeed, at the present day, it would seem as if nothing in the way of reckless surgery could be too impracticable or too absurd for commendation and imitation when permissible, provided it emanate from some "professor" however obscure, if only hailing from some university town in Europe.

Is it not, I submit, quite time that this unpardonable sycophancy, this pitiable servility, should cease to offend the intelligence, common sense, and patience of the bulk of our profession? Aping erudition is surely no proof of merit. There was a time, and it is not so very long ago, when it was not uncommon to hear America referred to as the birthplace of advanced and progressive gynæcology, and when the gifted and lamented Sims and our distinguished Fellow, Emmet, were demonstrating to the world the curability of ailments, which, until their time, were deemed beyond the resources of art. Nevertheless, at that very epoch, and as if oblivious to all this, articles on the accidents of parturition continued to be written, and text-books published for a considerable time, without note or comment on matters with which all here had been long familiar. As a noteworthy example, about twenty years ago the late Professor Charles Budd amused some members of the Obstetrical Society of New York. by stating as part of his experience on visiting a large metropolitan hospital in Europe the previous season, that he saw the surgeon on duty displaying his skill before a class by rubbing the edges of a vesico-vaginal fistula with a stick of nitrate of silver. At this very time we were probably extolling and practicing Freund's operation, or Nussbaum's method of exploring the abdominal viscera by a hand and arm forced through the rectum. Indeed, nearly ten years elapsed before the most important of the beneficent fruits of Sims' genius could be said to be appreciated, and even now some of our European idols, in return for our worship, would fain belittle, and through misrepresentation of its author's explicit views and directions, condemn one of the most valuable operations in the whole field of minor gynæcology. I refer to Emmet's operation for laceration of the cervix.

Let it not be imagined that this outspoken reference to a delicate subject springs from any illiberal spirit. Far be it from me to say ought that might detract from the well-deserved fame of illustrious European gynæcologists, to whose labors and original investigations we owe much, but, while admiring the verdure of far off fields let us cease to act as if our own were a barren waste. Medical science in all its departments must necessarily be cosmopolitan in the widest sense. Hence, on matters professional, we should be actuated by no selfish consideration, wedded to no hobby, faction, clique or country, swayed by no predilection, and influenced by no prejudice, but sink every inferior motive before the main object, *Principle*. Let truth, honor, candor and liberality be the only stepping stones to the genuine dignity and nobility of our calling.

Tros Tyriosve mihi nullo discrimine agetur.

RULES TO BE OBSERVED IN PERFORMING HIGH AMPUTATION AND OTHER OPERATIVE MEASURES FOR CANCER OF THE UTERUS BY GALVANO-CAUTERY.

BY JOHN BYRNE, M.D., M.R.C.S.E.

The American Gynæcological Society at its late meeting in Brooklyn, departing from the rule hitherto strictly observed of confining all papers to its volume of transactions, unanimously resolved to authorize and recommend the publication of the President's address in one of the medical journals.

To this resolution was also added the request that the president would include or add thereto some brief description of his method of performing high amputation of the cervix, or otherwise treating uterine cancer.

In compliance with this request, therefore, I have prepared the following:

NOTE.—The illustrations of this Article are, by permission, from advance sheets of the "International System of Electro-Therapeutics," by Horatio R. Bigelow, M.D. Figs. 1 and 8 are from photographs by H. V. Byrne, M.D.

It is well known to all who have had much experience with uterine cancer that in a very large percentage of the cases met with, whether in private or hospital practice, the disease is found to have already progressed so far that palliative results or a brief respite from suffering and death is all that can be hoped for from any treatment. In such cases, as for example when the entire cervix has been destroyed and the corpus uteri as well as the parametric tissues are found to be involved, my course has been as follows: First, to remove all softened and broken-down tissue by the free use of a *sharp* curette, and having sponged the cavity repeatedly with a mixture of one part of commercial acetic acid, three parts of glycerine, and carbolic acid sufficient to represent eight per cent. of the whole, I then pack the cavity with absorbent cotton and allow it to remain for a few minutes or longer as the case may be. On removing this, if all bleeding is found to have ceased, and the cavity fairly dry, cauterization may be proceeded with. If, however, oozing of blood to any extent should still continue, it will be best to pass into the cavity a properly rolled tampon saturated with the above styptic, and allowed to remain for forty-eight hours before the application of the cautery.

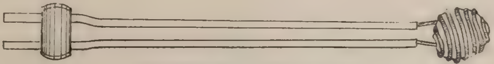

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FIG. 1.

Cauterization in all such cases should be conducted in the following manner:

The diseased organ should be exposed to view and the vagina protected by a Sims' speculum, and an anterior and two lateral retractors, and it may be necessary to seize the edges of the excavation by one or more volsella. Before introducing the cautery electrode a wad of absorbent cotton is to be passed into the cavity, held for a moment, and immediately, on being withdrawn, the dome-shaped instrument, Fig. 1, brought to a cherry-red heat, is to be rapidly and repeatedly passed over *the bottom* of the cavity mainly. The latter is then to be again dried by wads of absorbent cotton held in dressing forceps, and cauterization resumed as in the first instance. This process is to be repeated over and over again, until the deeper parts of the cavity have become dry and charred, when the sides are to be treated in precisely the same manner, and *roasted* to the same crisp condition. The seat of operation will now present the appearance of a perfectly black and *dry* cavity. All ragged and overlapping edges are next to be trimmed off by the cautery knife, a firmly rolled tampon of suitable size with thread attached, and saturated with the above styptic compound, is now to be placed in the cavity, and, finally, a supporting vaginal tampon is to be applied and the patient removed to bed. The *vaginal* tampon may be removed on the following day, but the other had better be allowed to remain for forty-eight hours or longer. The subsequent treatment will consist of vaginal douches twice daily of carbolized water.

HIGH AMPUTATION.

In conditions admitting of high amputation, the following is the method usually resorted to: The uterus is to be exposed and the vaginal walls protected in the manner already described. The diverging volsellum, Fig. 2, being passed well into the cervical canal, should now be expanded to a proper degree and locked, so as to afford complete control of the uterus during the entire operation.

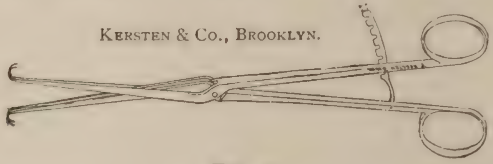


FIG. 2.

By alternate traction and upward pressure of the uterus, an accurate idea may now be obtained as to the proper point to begin the circular incision, so as to avoid injuring the bladder or opening into the *cul-de-sac* of Douglass. As to the latter, however, should it be found that the disease has involved the retro-uterine tissues, and that its excision or destruction by the cautery cannot be effected without opening into the peritoneal cavity, there need be no hesitation in doing so, as I have never known any harm to come from it whether done accidentally or by design. Should it be evident at the outset that the operation, in order to be thorough, must include a portion of the *cul-de-sac*, it will be better to make the line of incision anterior to this, until the cervix has been removed, and leave the excision of the retro-uterine parts *by the cautery knife*, to be the final proceeding. Under these circumstances all that will be needed will be an antiseptic tampon properly applied.

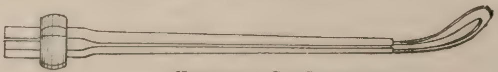


FIG. 3.

In proceeding to make the circular incision the cautery knife, Fig. 3, slightly curved *and cold*, should be applied close up to the vaginal junction, and from the moment that the current is turned on, should be kept in contact with the parts being incised. Fig. 4. Before removing the electrode for any purpose such as change of position, or altering the curve of the knife, the current should first be stopped and the instrument again placed in position while *cool* before resuming incision. In other words, if *the knife, though heated only to a dull red, be applied to parts at all vascular, hæmorrhage*

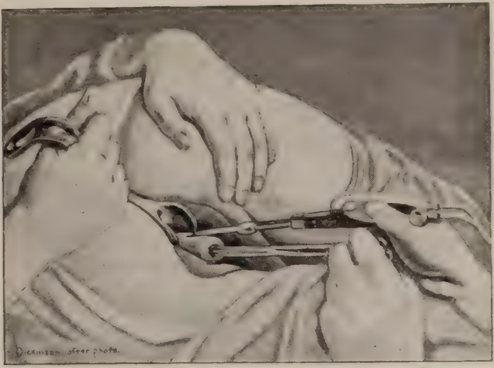


FIG. 4.

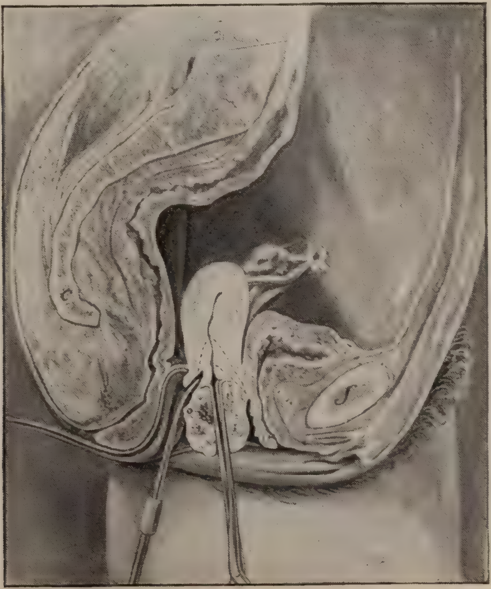


FIG. 5.

more or less will certainly follow; whereas, the cool platinum blade being already in contact with moisture as the current is being transformed into heat, vessels are shrunken or closed even before they are severed.

This is a very important point and should never be lost sight of in all cautery operations.

The circular incision having being made to the depth say of a quarter of an inch, it will now be observed that by increased traction the uterus may be drawn much farther downward, and by directing the knife upward and inward the amputation may be carried to any desired extent (Figs. 5 and 6). In cases calling for amputation above the os internum, it will be better to excise and remove the cervix first, then, by dilating the upper canal sufficient to admit the diverging volsellum, once more proceed as in the first instance, taking care, however, to keep within bounds (Figs. 7 and 8). It will be found that the cupped stump can now be drawn down and made to project as a more or less convex body.

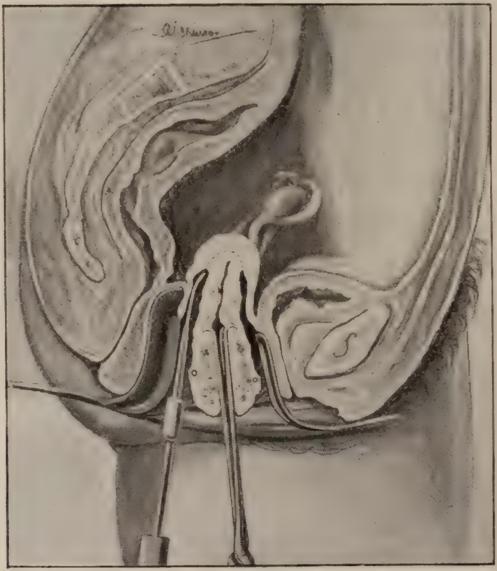


Fig 6.

In all cases the dome-shaped electrode (Fig. 1) should be passed over the entire cavity repeatedly so as to render the cauterization still more complete.

It is important to add that, in carrying the knife toward the *sides* of the cervix, circular and other arterial branches are apt to be encountered, and hence, in this locality particularly, a high degree of

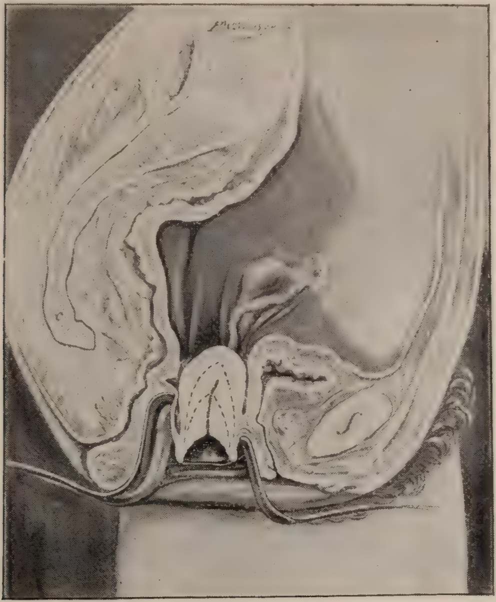


FIG 7.

heat in the platinum blade is to be carefully avoided. As an additional security against hæmorrhage, the convexity of the knife should be pressed against the external surface of each particular section cut, so as to close vessels more effectually.

It is well to state that the metallic parts of the electrode *for the*

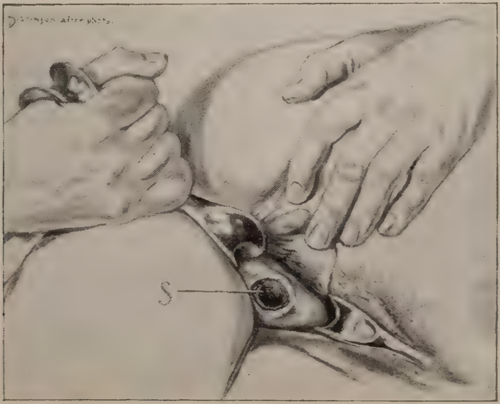


FIG. 8.

distance of about two inches should be covered with a strip of thin flannel, so that the vagina may be protected from injury through the reflected heat.

A PLEA FOR A MORE CONSERVATIVE TREATMENT OF NASAL AFFECTIONS.

BY REUBEN JEFFERY, M.D.

Read before the Medical Society of the County of Kings, March 13, 1889.

It is not my intention this evening to present to you an elaborately prepared essay. Papers of that character are better adapted for bodies that are more interested in the subject under discussion and not for one of a general character like this. As a consequence, my article will be as the title indicates, simply a plea, general in character and more or less of an argumentative purport.

The history of progressive medicine has been, for the greater part, a succession of radical invasions into time-honored customs. No matter how far back we may carry our investigations, we discover that all the great advances of our science have been, as a rule, the result of some daring operative measure, or else the culmination of labor in new fields by methods at variance with our usual customs. We are told that before trephining was introduced by the rotary motion, that its earliest advocates used a chisel in removing cranial plates. While the theory of the ancient practitioner was correct, his method, though radical, was most faulty.

There was a time in history, somewhere about the seventh century, when trephining was of much more common occurence than it is to-day. Thomas Johnson, an English writer of some repute, in a work upon surgery published in 1649, states that during the period above referred to, the trephine was considered to be of great service in all "those affections of the head which were painful or mysterious when otherwise treated." At the time of which he writes, this custom, which we know to-day to be of so much value as a surgical procedure, had been in disuse for nearly one thousand years. He argues for its re-adoption and states that if used only by surgeons much good can be done for certain conditions.

Numerous illustrations of a similar character might be mentioned, of how many meritorious appliances and remedies have been forced, by public sentiment, into a long retirement on account of the injudicious and abusive use to which we ourselves had put them. Look back to the early medical history of this century; recall the days of phlebotomy and calomel. Possibly a few of you, among the older members, can remember how the sentiment of the day forced these customs into their long resting-place on account of their indiscriminate use, only to be re-awakened after a lapse of many years under more conservative auspices.

We talk to-day of the high standard of our professional excellence; our young graduates consider themselves as the first offspring of the arcadial dawning, and that the zenith of medical lustre shines about them. But history repeats itself. Before the deeds of this century shall have become a matter of history, more will appreciate the fact that when God created man, he made him, so we are told, in his own image, perfect and complete. He did not require experimental procedures to improve what He himself had brought forth. He made the abdomen of woman for a grander purpose than the experimental laparotomist would have us believe. The muscles of the eye were adjusted without the need of partial tenotomies, and the nose itself was the result of the carefully matured plans of the same Architect.

The diseases of the nose and throat have, of late years, received considerable attention. The knowledge of the exact character of the so-called catarrhal conditions of the upper air tract has only been definitely known for a comparatively few years. Let us review for a moment the history of the treatment. Thirty years ago, there was not any special work done in this country in this class of affections. The discovery of the laryngoscope had awakened considerable interest in Europe. The late Morrell Mackenzie had just published his work on the laryngoscope and diseases of the larynx. During the sixties, all attention was paid to this organ, and it was considered that the larger part of the accumulative catarrhal affections originated within the laryngeal cavity, and that diseases of the larynx were chiefly primary in character. The seventies developed interest in nasal diseases. The ætiology of this class of affections, based upon an erroneous conception, was necessarily not treated in the method that our present knowledge would teach us. Sass introduced his spray-tube, which, with the various solutions at our disposal, was thought would prove a specific for the majority of catarrhal affections. Every physician that was able placed an apparatus in his office. To-day, outside of a cleansing agent and for a few acute conditions, the atomizer is known to be worthless. Acids, next in succession, were largely used, but are gradually falling into disuse. Powders followed. The markets were filled with powder blowers, sanguinaria, borax, lycopodium and especially iodoform, as well as many others, were adulated in the medical journals. With the exception of the bicarbonate of soda and a few used as snuffs, they have all practically been retired, and are scarcely ever used now in the powder form. Next came the most erroneous method of all, the astringent treatment, which in fact, was only the revival of an old custom that had become obsolete. Glycerole of tannin, strong solutions of silver, etc., were indiscriminately applied, but as experience has taught us, without much avail. In due time the surgical, or what was termed the radical treatment, made its appearance. It was ushered in with bells and rejoicing. To the surgical treatment nasal affections owe their greatest triumphs. At this epoch, the eighties were approaching, Elsberg had devised a snare. His snare, slightly modified, is now known throughout the world as the device of Dr. Jarvis. Bosworth was next on the scene with the meritorious nasal saws that bear his name. Then the cautery was reintroduced, and the market has been surfeited since with galvano-cautery appliances. Next appeared nasal chisels, quickly followed by a most ingenious instrument—Curtiss' nasal trephine.

Besides the fore-mentioned, nasal scissors, bistouries, forceps, together with a large and varied assortment of nasal instruments have been introduced without number.

It is not the use of these instruments that I desire to speak of. Like many of the remedies that I have mentioned, all have a part to play, and to their use much good can be credited, but it is to their abuse and indiscriminate use that I would call your attention.

The necessity of the nostrils properly performing their physiological functions is not appreciated to the extent that their importance warrants.

The exact relation of diseases of the body to impaired activity of the muscular, as well as the glandular structures of the nares, is not sufficiently known, but I believe that there is a field for future investigation that will result in many startling disclosures. To my mind there is no doubt that the theory that many of our contagious diseases germinate in the nostrils is correct, and it is essentially true, the more sluggish the physiological activity the greater the danger of contagion.

In nearly three years of investigation, I have never known of a patient suffering from an attack of hay fever or periodical rhinitis of any form, contracting a disease of germ origin. Why is it that young children are so much more liable to contagious affections than adults? Why is it that after the third year of life, the period when muscular activity of the nostrils commences to assert itself, that the tendency to childhood diseases grows less and less? Why is it that there is more fatality among mouth-breathers than those who have the power to bring into play properly the function of the nostrils? These are only questions. It is not the purport of my paper to answer them. It demonstrates, however, the necessity of not interfering with the intent of nature. It helps to disabuse the erroneous impression that surgical work of the nostrils cannot do any harm, if it fails to do good, and may some day result in teaching us that over-treatment may be the cause of as much harm as like results upon what are considered as more important organs.

The statistics of our throat clinics assert that seventy per cent. of the cases of rhinitis that come under observation, are of the hypertrophic order. My personal experience inclines me to the belief that the reverse is the case, and that the majority of our symptoms in chronic conditions are the result of atrophy. There is no question but there is a vast difference of opinion as to what constitutes these two classes. In my limited experience as an instructor in the New York Post Graduate Medical School, I observed that the larger proportion of the physicians diagnosed the case according to the condition of the sub-mucous structures and apparently were but slightly influenced in their opinion by the appearance of the mucous membrane itself. If the osseous portion of the turbinated bodies was enlarged, the case was hypertrophic. If the sub-mucous tissue was thickened or infiltrated, again the case was hypertrophic, and the same would be their opinion where there was vascular engorgement or motor relaxation, not for one moment considering the condition of the glandular and muscular structure of the most essential factor of all, the mucous membrane.

There can be no question that, though the conditions just described are for the most part associated with a hypertrophic membrane, it nevertheless is true that atrophic degeneration of the membrane is not necessarily associated with a similar pathology of the submucous tissue, except in cases of congenital smallness, atrophy with œzena, or in patients with a strumous or syphilitic diathesis. It is of this vast proportion of cases, in which there is passive physiological action of the mucous surface, with more or less enlargement of the submucous tissue, that I desire particularly to speak. It is to this class of cases that great harm is being done by radical treatment, a class where the cautery should never be used and in which other surgical methods are with great exception warranted. Why don't you, when a man fractures his arm, and after being in splints for the specified time, restore its use with a red hot poker or else by cutting it off? As ridiculous as this question may appear, it is exactly what is being done at the present time in the treatment of many catarrhal affections of the nostrils. Membrane and muscular fibers, which have become passive by disease, are being cured by burning them up or cutting them off.

I do not intend to dispute the fact that there is a class of affections of the nostrils to which surgical measures must be applied. The various forms of mechanical obstructions traumatic and ulcerative adhesions, the various forms of growths which find their seat in the nasal cavity, as well as certain reflex conditions belong properly within the scope of the surgical affections of the nostrils.

Secretive diseases of the various forms should be exempted, as far as possible from destructive agents. I have never believed in the theory that small enchondromata or ecchondromata, together with the many slight pathological enlargements which are characteristic of the nasal fossæ are the cause of the symptoms, provided they are not large enough to interfere with drainage or respiration. The custom of the day would indicate that the majority of rhinologists differ with me in this respect, but be that as it may, I believe the mucous lining which covers these slight protuberances, to be of more value to our patients than simply a theory which has never been practically substantiated. In a certain proportion of our cases, in which the symptoms indicate more or less obstruction, the patient perhaps being a mouth-breather, an examination reveals a more or less collapsed condition of the soft structures, we have been told to contract this tissue with the galvano-cautery. If in all such cases we would stop and investigate the cause that has produced the result, study carefully the pathological condition which exists, we would find that one word would give us our diagnosis, and that word is paralysis. Paralysis not only of the anatomical structure, but also of its physiological functions, just the same as when there is motor or sensory collapse in any other part of the organism. The same therapeutical law applies exactly. We are obliged, should we obtain satisfactory results, to gently stimulate, by the various methods at our disposal, the dormant condition of the part but never destroy it.

The majority of nostrils are dormant because they have never been properly educated to perform the work that was expected of them. The mouth has ever been too ready to relieve its adjoining neighbor of much of its labor. Physiological inactivity has always ranked among the foremost ætiological factors of disease. The condition that we have to deal with, being the result of apathy, do not let us further augment that which we are trying to relieve by destroying the terminal filaments of those motor nerves which are so essential to the nostrils in performing their labor.

My subject is so vast in character that I have only been able to generalize, but before concluding, I desire to tell you with more detail of my method of conquering, as far as possible, the conditions to which I have alluded. In the first place I am inclined to the belief that a large number of the symptoms of the upper air tract are the local manifestations of some constitutional disorder, and that local methods of themselves are not sufficient to accomplish the desired end. While I have no authority for the assertion, except my individual experience, I have observed a close relationship between diseases of the nostrils and the nervous system as a whole, independent, however, of the well established neuroses of the nostrils, between the vault and middle pharynx and the gastro-intestinal tract and the lower pharynx and larynx with some kidney affection. If we are able to find a connection the form of constitutional treatment suggests itself. The local treatment should be of a stimulating character. I would consider myself remiss if I failed to designate exactly what I mean by that term. The expression to stimulate is a good deal like the word catarrh, inasmuch as it is susceptible to many interpretations which are vague. To my mind, stimulation of paralyzed structure is the use of those agents which tend, first to increase a healthy arterial supply; second, nerve activity; and third, an equilibrium in the secretive powers of the racemose glands and of the epithelial cells. How shall we accomplish this desired result? The unanimous verdict is by stimulation. The theory of the day has been that, inasmuch as the condition is the product of over-stimulation, it is essential that we should remove by destructive agents the superfluous tissue. The absolute fallacy of this assertion I have before referred to. Wright, in a monograph published during the past year on the "Etiology and Treatment of Atrophic Rhinitis," advocates, among others, as a stimulating agent the galvano-cautery at a dull red heat. Galvanism, as described by Dr. Shurly of Detroit, is of advantage in a small proportion of cases, although I believe that he, as well as others who have been carrying on his investigations, have used too many milli-ampères. Another method of stimulation, which has more or less advocates, is the system of using tampons of antiseptic absorbent cotton, as advocated by Gottstein. The difficulty, however, with this method, outside of the discomfort to the patient is the fact that prolonged pressure is very apt to be followed by relaxation, and as a consequence the effect is thus often neutralized.

The old method which is still in vogue, of using stimulating solutions with a spray or cotton applicator, I consider to be of very little service outside of the temporary relief that they may occasion, and I am inclined to believe that the same has been the experience of others, though for some unaccountable reason, they are still used with considerable tenacity and perseverance.

My experience has led me to the belief, which has nearly become a conviction, that the chief benefit comes from systematic home treatment. The first essential is cleanliness. This should be accomplished either by the use of the hand atomizer or in cases where there are aural complications, or if our patients should be very small children, soda and vaseline should be used for this purpose. The patient should be taught to imitate nature as far as possible in performing the act of respiration. The nasal muscles should be systematically drilled by passive motion until capable of sustaining themselves. At night the patient should wear some form of apparatus that will distend the alæ nasi. It is astonishing the great good that can be accomplished by the simple methods that I have advocated. Nasal supports, for separating the intrinsic structures of the nostrils, have been quite numerous. The first were made of metal but were a source of considerable irritation. Dr. Goodwillie devised some of rubber a few years ago which have been practically useless in my hands. I believe that the suggestion of my colleague, Dr. William A. Dayton, draws us nearer to the solution of this most perplexing question. With the little instrument which he has devised he satisfactorily supports and thus keeps open the vestibule of the nares. The mucous membrane is not touched by it and consequently there is no troublesome irritation. His method allows atmospheric pressure to exert its influence upon the intrinsic structures, and invariably the result is most satisfactory.

There are exceptions to all rules, and so there must be necessarily times when we are justified in varying from the conservative policy that I have advocated; but be that as it may, it is certainly true that a simple condition merits simple treatment. We are not justified in producing, if I may be pardoned in coining a term, a traumatic atrophy. I know it is said that simple catarrhal conditions, if not checked, lead to dire results, and that phthisis is one of the sequelæ, but let me emphatically express my conviction that no person has ever developed phthisis from a simple primary catarrhal affection. Dr. Bosworth truthfully states that you cannot plant corn and raise potatoes, and equally is it true that in all cases where phthisical subjects have early suffered from catarrhal affections, the said affection was nothing more nor less than an early forecast of the impending dyscrasia. The phthisis is the cause of the catarrhal condition, not the result. One matter that deserves our conservative attention is the extensive habit which many have adopted of using weak solutions of cocaine. While I cannot question the fact that cocaine allays irritation and makes it more agreeable to the patient for the introduction of applicators and especially eustachian catheters, there can be no question that cocaine, through its temporary paralyzing effect, becomes an ætiological factor in the subject we have under consideration.

In conclusion, I have merely to request that you look carefully into this conservative plea which I have presented for your consideration. As I intimated in my introductory remarks, it behooves us to be careful lest we overstep the limits of public toleration, for if we do, cautery, trephine and snare will be hurled like calomel and the leech have been before them, to a long, long sleep, which will outlast the memories of this generation.

DISCUSSION.

Dr. C. C. Rice :—Mr. Chairman and Gentlemen :—I think this society is under great obligations to Dr. Jeffery for the very successful way in which he has plead here this evening for conservative surgical work in the treatment of affections of the nose. There is no question but that such a vital question is opportune. It is always wise to sound a word of warning against the too frequent operations of the over-enthusiastic operator who spends all his time in operating upon one portion of the body. Dr. Jeffery has very clearly reviewed the different modes of treatment of nasal diseases which have existed during the past fifteen years, and but little remains to be said in regard to that. I choose in the few words which I shall say, to speak in regard to my own experience in the treatment of nasal affections. I remember that in 1880, Dr. Elsberg, brought from Paris a galvano-cautery apparatus. I think it was the first introduced in New York for the treatment of nasal disease. Although Dr. Jeffery has stated that importance of the study of nasal affections and their relation to diseases of the pharynx and larynx were appreciated as early as 1870, I think little intelligent attention was given to the subject before 1880. I remember talking with a gentleman who had just returned from a meeting of the American Laryngological Association in Boston, in 1880, and hearing him state that at this meeting, the subject of nasal affections and their relation to diseases of the upper respiratory tract had been more fully discussed than at any previous meeting. So much attention was paid to the subject at this meeting that he predicted that in the future the association would be called the Rhinological rather than the Laryngological Society. I only speak of this to show that it was about this time that the American laryngologist began to appreciate the very intimate relation between diseases of the nose and those of the pharynx and larynx. Before that he had been content to treat the larynx only. The success with which he used the laryngeal mirror was a temptation to him to treat the larynx alone. Laryngitis was considered a disease by itself, and was treated with little reference to an existing nasal disease. Nobody can doubt that an advance step was made when physicians appreciated that the nasal disease was more important than the laryngeal disorder, and was the part of the respiratory tract which should receive first attention and perhaps more attention than any other part. Dr. Jeffery has, in his very able paper, spoken of the dangers resulting from errors of diagnosis, and from consequent faulty methods of treating nasal diseases.

During the period from 1870 to 1880 the treatment of nasal diseases was confined almost exclusively to the use of the atomizer. The theory of nasal disease was that it was an ordinary catarrhal trouble as evinced by hypersecretion and by congestion and thickening of the mucous membrane, and that the proper way to cure it was by endeavoring to astringe the mucous membrane by so-called astringents, such as copper, zinc, silver, glycerite of tannin, etc., and these drugs were applied to the nasal chambers.

If I was obliged to return to those old methods of treatment of nasal affections, I should certainly have listened more attentively to the first paper of the evening, and should conclude to leave the practice of laryngology and adopt that of gynæcology.

The effort to astringe the nasal mucous membrane with astringent sprays was a failure. Patients came daily for the nasal spray and when asked, "How are you to-day?" would answer, we have caught cold. It was the medication that produced the cold. The patient had a great deal more faith in the treatment than the physician who was administering it. Finally the patient became thoroughly tired out. This is not an overstatement of the effect of local sprays in the nose. I do not believe in anterior nasal sprays unless they are of the mildest character.

I do not quite agree with Dr. Jeffery that the atomizer is only useful in the acute affections. We have now in daily use the petroleum products, such as benzoinol, alboline and liquid vaseline, and they are most useful in atrophic disease and the purulent catarrhs of children, they cannot possibly do any harm. On the contrary, I do not think we ever spray copper and zinc solutions without doing more or less injury. Now in regard to surgical treatment of nasal disease. We see many cases of nasal disease where good judgment teaches us we should not employ surgical methods, but we are all familiar with the many cases that come to us with marked deviation of the septum, one nostril entirely blocked, or perhaps obstructed by a spur of cartilage or bone. These are the common nasal lesions which come to specialists. Are we to spray these nostrils with astringent solutions, or are we to open such nostrils in order that the patients may easily breathe through the nose; Nasal obstructions I believe are the most frequent cause of catarrh of the pharynx and larynx Dr. Jeffery has spoken of one class of cases which deserves serious consideration, cases where we have so-called hypertrophy, but with a tendency to atrophy.

It requires an experienced eye to detect when the tendency to atrophy is present. Cauterization applied to such nostrils very quickly accomplishes far more than was desired, and hastens the atrophic disease. The production of atrophic rhinitis and pharyngitis sicca is the more frequent injurious effect following an unnecessary operation. We consider certain men safe because their judgment is good; they are good operators, and they know how to treat patients properly after they are operated upon. Such men do not have bad results.

The instruments that are used to-day in operating upon the nasal tissues are thoroughly adapted for the purpose, and when properly used they do accomplish brilliant results. There is no objection to the removal of spurs of cartilage and bone on the septum. I much prefer to do that than to operate on the turbinated side of the nose. I feel that the turbinated side is of such physiological importance that it should be left untouched as often as possible, and not destroyed by cauterization, drilling or sawing. I have never seen dry conditions of the nose and throat following the removal of spurs of cartilage or bone from the septum. I do not believe that the amount of nasal surgical work is any larger than it was five or six years ago.

Dr. French:—I believe that the author of this interesting paper has touched upon a very important matter. My views very nearly coincide with those which he has expressed in regard to the amount of unnecessary surgical work which has been and is now being done in the nasal passages. I cannot agree with Dr. Rice that this is not so. The slightest irregularity in the surfaces of the septum or enlargement of the turbinated bodies, seems to be sufficient ground, in the minds of some operators, to justify the introduction of instruments into the nose for the purpose of destroying tissue which may be serving a most important physiological purpose. This is to be regretted, not only because of the damage sustained by the nasal tissues, but, also, because of the danger of a reaction in feeling which would tend to cast discredit upon intranasal surgery. I suppose it is because rhinology is the youngest, that it is the most abused of all the specialties.

I believe that the tendency of competent rhinologists is towards conservative measures and to avoid surgical interference as much as possible. A few have even gone so far as to give up local treatment almost entirely. I remember having read in a little book, written by an eminent rhinologist six or eight years ago, the statement that almost any case of catarrh of the throat or nose could be cured by the application of alterative or astringent remedies in eight or ten weeks. The writer's belief has, however, suffered a reaction from the extreme views formerly entertained, for I recently learned that he had given up local treatment almost entirely and depends upon constitutional measures for his results, and he thinks they are better now than those obtained from local treatment. As I have already said the tendency of the times is towards conservative measures and the avoidance of surgical interference. But there is a large class of cases in which nothing short of surgical treatment will give relief. The propriety of instituting surgical treatment for the relief of nasal disorders depends very largely upon the judgment of the operator as to the method and manner of operating, and the amount of tissue which it is necessary to remove or destroy, in order to obtain relief of symptoms. I believe it is because of a lack of judgment, or a lack of knowledge, or because of undue enthusiasm in this new field, that so much unnecessary surgical work has been done.

Dr. Jeffery has referred to the importance of the nasal function and to the injurious effects resulting from the habit of mouth-breathing and, if I understood him correctly, he said that in order to assist in preventing this pernicious habit, he instructed his patients in the use of springs with which to dilate the nostrils. We know that the function of the nose is an extremely important one and that if the nasal passages are obstructed, respiration must be carried on through the mouth, and we know that mouth-breathing is a baneful habit. If, on the other hand, the nasal passages are, through surgical interference, made too large—and that I fear is not infrequently done—respiration might almost as well be carried on through the mouth for, under such circumstances, the air is not sufficiently warmed, moistened or cleansed. I do not believe it is always possible to determine by simply looking into the nose, whether nasal obstruction exists or not. The passages may appear to be too small and yet the patient may get sufficient air through them both day and night; or they may appear to be large enough and yet prove not to be so. In cases of doubt I am in the habit of directing my patients to tie up the chin, with a little device I have for that purpose, which keeps the mouth shut during sleep, and if after a week or ten days they are able to report that they can keep the apparatus on, and that it is on in the morning as well as when they put it on at night, then I feel moderately well satisfied that they can breathe freely through the nose, and do not feel justified in destroying tissue, unless it is apparent that it is causing catarrhal discharges or reflex phenomena. There is a class of cases in which nothing short of surgical measures will give relief, and there is another class in which they are most mischievous.

I believe that one of the reasons why so much unnecessary surgical work has been done, is because of the failure on the part of the teacher to impress upon the student the necessity for becoming familiar with the detail of the anatomy and physiology of the nasal passages, as well as the diseases which affect those parts, or the failure on the part of the student to be impressed.

An amusing incident, bearing upon this point, was recently related by a western rhinologist. He said that a doctor came to him from a country town to receive instruction in the use of instruments for the treatment of diseases of the nose and throat, and among other things he taught him was the use of the galvano-cautery in the nose. He showed him how to apply the cocaine, how to introduce the cautery loop and advised him to confine the burn to one spot. The doctor went back to his home and in a few weeks returned to the city and accused the rhinologist of getting him into a lot of trouble. The rhinologist asked him what he had done and the doctor said: "I went back to my town and burned every fellow I could lay my hands on, and now there are lots of blooming noses up there, and they all blame it to the cautery." The rhinologist said it was probable that they were right. "Very well," said the doctor, "then you are to blame for I did exactly as you told me to do." "How did I tell you to do it," asked the rhinologist. "Why," said the doctor, "you told me to put in the cocaine, and then to poke in the wire, turn on the fire and *go so*, and I did that every time."

I believe that in much of the surgical work done by incompetent operators, there is too much of *going so*, and, therefore, in a large number, perhaps the majority of cases of nasal troubles, better results will be obtained, and certainly less harm will be done by the use of mild measures than from surgical interference.

There is a tendency to overlook the constitutional causes of nasal diseases. Many cases are the result of gastric and intestinal disorders, or are caused by sedentary habits, or deficient nutrition from any cause. If the cause is sought for, found and removed, the nasal trouble will often disappear without local treatment. I believe that the best results will be obtained in the treatment of the majority of cases of catarrhal diseases of the nose and throat, by keeping the parts thoroughly clean; by applying alterative remedies in very weak solutions in oily vehicles; by keeping the mouth closed during sleep; by paying careful attention to the digestive apparatus, and by paying careful attention to personal hygiene.

Dr. O. B. Douglas:—Mr. President and Gentlemen:—The subject of Dr. Jeffery's paper is to me extremely interesting—a plea for more conservative treatment of nasal affections,—and I congratulate Dr. Jeffery and this society on the able manner in which he has presented it and the history of the work that is being done for diseases of the nose. It recalls much in my own personal experience. I look back fifteen years when I was first interested in this special subject, when the best thing we thought could be done for diseases of the nose and throat was to swab out the throat, or syringe, spray or gargle, and that was expected to cure pharyngitis. It failed, of course; but conservative treatment seems very proper to consider just at the present time because we have done some things which ought not to have been done, or should have been done better. I include myself with those who have been doing a good deal of operative work.

I like the idea of conservatism, but it seems to me we want to define the word. Conservatism is a relative term. That which to you is conservative may be to me an innovation. Therefore let us stake out the grounds of our faith and practice, let us define our position, then invite conservative and progressive alike to occupy the land with us—as Dr. Jeffery has indeed done. Conservatism does not imply progression—though they are not inimical. We believe in progression in our noble science. Change and improvement is the law of life—stagnation is death.

We want to know what principles are conservative and what are progressive, who the conservative men are. An innovation is not necessarily bad. I believe, as Dr. Jeffery says, that the great progress which has been made has been made by men who have had courage to do something which had not been done before. Not many years ago laparotomy was supposed to be sure death.

This is brought to my mind—as an illustration—because I have a patient under my care who undoubtedly had an attack of appendicitis, and when I suggested the nature of his trouble, he said he understood that everybody died who had an operation performed. A few years ago it would have been an innovation to have opened the abdomen in any such case as that; now we say it is conservative to do that very thing. So, while I have been profoundly interested in what Dr. Jeffery has offered, I do not say that I agree with him entirely.

Dr. Rice has told us that "we need to make progress," and I think if you will study carefully the progress which has been made in this particular branch of surgery in fifteen years, you will find that we did need to make progress, and that there has been greater progress in this than in any other department of medicine. I had occasion to look over the record of work done in our State Society, and found that never, until 1876, was there a paper read or a suggestion recorded in any of the printed transactions of the society that such a disease as catarrh of the nose or throat existed prior to that date, when Dr. Roosa was bold enough to read a paper on "The Evil Effects of Neglected Cold in the Head." From that time this special work has attracted more and more attention. I speak of this, because with such progress, with the success that has been achieved, the work is very liable to be overdone.

I remember Dr. Emmet's caution in reference to that which is termed "Emmet's operation." He said that he found "his chief work was now to cry a halt, to prevent excessive work in that which he had advocated." And well may those who have been successful in this work of nasal surgery watch jealously its progress, cry halt! Don't go too far.

Not long since, it was my sad duty to examine a nose which had been operated upon by one of the ambitious operators. He had not only taken out redundant tissue, that might have interfered with respiration and proper drainage, but he had taken everything he found in the nose, there were simply two holes left. That was an operation by one more enthusiastic than wise. Conservatism is common sense, but does not mean stop working, it does not mean do not remove that which is doing harm.

I am well convinced, not only as Dr. Rice has said, that very much the larger number of those who suffer from catarrh are suffering as the result of nasal trouble primarily, but I believe that forty-nine fiftieths of all pharyngeal and laryngeal troubles are traceable to obstructions in the nose. Now, does conservatism consist in allowing those obstructions to remain and their evil effects to continue, or is it conservative to remove those causes? A few years ago we certainly would have sprays, swabs and gargles, and done what Dr. Jeffery has advised and believed we were doing all that could be done to relieve catarrh; now, I think the tendency is to pay very little attention to the pharyngitis—which was a disease we labored so hard to cure—but to say, it is due to a cause, it is the result of an irritant and ask, where is that irritant? It may be the pharyngeal tonsil, if so that tonsil should be removed. This is conservative. If you do not find those glands enlarged and do find a middle turbinated body persistently in contact with the septum—thus retaining the secretions and producing reflex irritation,—then it is conservative treatment to take it away.

While Dr. Jeffery has warned us against the undue use of cocaine, I do not know how we can get along wholly without it. If thickened tissues in the nose retract under the influence of cocaine, then we know surgical interference is not required. If that thickening persists after the use of cocaine, it is a condition which surgery alone can correct. But conservatism says, *take away only the superfluous tissue, don't take that which is not absolutely and persistently obstructive.* We may have a perfectly free respiratory canal, yet there may be a condition that requires attention—possibly an operation. It is not sufficient simply to be able to breathe readily, we must have a nostril in which the secretions will not be retained. Conservatism requires that we search for and remove, wherever we find it, the cause of irritation. If it be in the throat, in the finger or in the eye. Conservative surgery does not permit the use of salves or lotions to palliate—to relieve the pain simply—while the irritant is allowed to remain. And that is what laryngologists proclaim to-day,—take away the cause in the most effective manner, removing if necessary everything that obstructs, that should be removed, but saving every portion that can be saved, and save the patient.

Dr. Woolley:—In my experience I am constrained to give expression to a few remarks. I was very much interested in the paper to-night that was read by Dr. Jeffery, but must say that I am inclined to agree with Dr. Rice, and feel somewhat enthusiastic over the surgical treatment. I may be pardoned when I tell you, gentlemen, that for many years I was a sufferer from catarrhal affections. I visited a number of specialists, was treated by sprays and other methods, but without result. For many years I suffered also with headaches; but it was my good fortune to fall a few years ago into the hands of Dr. Rice. He performed an operation and through that method I am now able to breathe well through my nose, which was neglected by the other physicians. As a result of his treatment, I am now free from catarrhal affections of any kind, and for two or three years, I have been able to breathe freely, sleep pleasantly at night, and without any headaches whatever. Furthermore, let me say, I have been so enthusiastic upon this subject that I have performed these operations myself.

In many cases where they have been to other physicians without any results, by removing certain spurs or correcting certain deviations, symptoms which were unpleasant disappeared, and as a result of at least fifty operations I can say there have been no bad results in any of the cases. If I may be permitted I will call your attention to one man, a prominent clergyman, upon whom I operated. As a result of my operation he has been improving. Laryngitis, from which he suffered, has disappeared and he is getting along remarkably well. I have nothing further to say only to endorse the ideas advanced by Dr. Rice. While I admit there may be too much radicalism on one hand, there may be too much conservatism on the other.

Dr. Cox:—I am very glad to know that this subject has been brought up, for the particular reason that I think specialists have been accused in a wholesale manner of treating cases too radically. I think the paper and discussion to-night will show that some specialists, at least of Brooklyn and New York, are of the conservative sort. I wish myself to be placed in that class. Of course, the term conservatism admits of qualification, and I think the gentlemen who have discussed the paper have thoroughly defined it. While it is very important not to do too much, it is just as important to do that which should be done, and those indications have been fully given.

THERAPEUTIC MANAGEMENT OF SUMMER DIARRHŒA IN INFANCY.

BY W. M. HUTCHINSON, M.D.

Read before the Medical Society of the County of Kings, June 21, 1892.

The results of observations made during the past few years show that much can be done in diseases of the gastro-intestinal tract in the way of prevention; so much, in fact, that it would almost seem that with still farther advances in our knowledge of the exact ætiology of these diseases, we should be able to carry out prophylactic measures so successfully that the term summer diarrhœa would be a misnomer.

All prophylactic treatment should be directed toward accomplishing two results, viz.: 1st, in securing as nearly as possible an aseptic condition of the intestinal tract; 2d, in counteracting the debilitating effects of high atmospheric temperature.

In endeavoring to prevent the entrance and development of bacteria within the canal, we should place the infant in as good general and personal surroundings as possible. There should be no collections of fermentable material—no dirt—allowed to accumulate in streets, sewers, dwellings, clothing or persons, to act as culture media. Abundance of fresh air and sunlight, the best antiseptics, should surround the child, secured by roomy apartments, numerous open parks or plazas, and frequent utilization of seaside homes, day excursions and fresh air funds, which do more to lessen mortality from diarrhœal diseases than all medicinal treatment combined. All excretions should receive proper attention by removing the child from the living or sleeping room to change its linen, and the immediate boiling or immersion of the napkins in an antiseptic solution. especially those from infants sick with diarrhœa.

By far the most important, as well as probably the most difficult problem that presents itself in the whole field of prophylaxis is that of correct feeding. That natural feeding should be practiced during and through the summer months, if possible, probably all are agreed. The high mortality from diarrhœas in the hand-fed is only too well appreciated by every one practicing pædiatric medicine.

The experience of the past few years has clearly proven, however, that the great number of cases of diarrhœa in the artificially fed is not because of the hand feeding itself, but because of the highly improper way in which the feeding is done, usually through ignorance on the part of the physician or parents, sometimes through want of proper facilities.

The reports of orphan asylums and nurseries show that of late the death-rate among the hand-fed is scarcely higher than those nourished by the natural method. This is a very different state of affairs from that formerly existing in these institutions, before correct prophylactic measures were carried out, or from what still largely exists among the children of the poorer classes, especially in large cities.

The scope of this paper would not permit me to attempt any detailed account of methods or specific rules or directions for carrying on infant feeding. This ground has been well and thoroughly gone over of late, and for a careful and complete *résumé* of this subject the report of the Committee on Diseases of Children of this Society that was presented to the Society one year ago and published in the BROOKLYN MEDICAL JOURNAL, October, 1891, deserves special mention and is recommended to the careful perusal of all interested in the prophylaxis of diarrhœal diseases. The experience and observations of the year that has elapsed since that report was made, have strengthened the conclusions therein contained, that the most nearly perfect food for young infants is normal human milk, and in the absence of it the very best substitute is the milk of animals, that of the cow being almost universally selected. The writer has had opportunity quite recently of making some further observations upon the action of properly modified cows' milk sterilized.

At my suggestion and under my direction, the Brooklyn Diet Dispensary sterilized and dispensed 17,000 six and eight-ounce bottles of cows' milk for infant feeding during the summer of 1891. A large number of the infants fed upon this sterilized milk were kept under observation, and it is my firm belief that many, especially the cachectic and feeble babies that would otherwise have perished, were tided over the summer. The result of last summer's observation was to confirm the belief that I have for some years held, that with proper dilution and correct chemical modification, according to the methods suggested by Arthur Meigs and improved by Rotch, cows' milk sterilized for forty-five minutes at a temperature of 212° F., is the very best material that can be employed for the artificial feeding of infants during the summer months in the great majority of cases. And yet the difficulties that beset the method of dispensary sterilization, such as the expense of distribution to branch depots and the trouble, amounting almost to an impossibility, of getting mothers to call for their daily supply with regularity, have made it advisable to give it up. Home sterilization is also difficult to have carried out with perseverance, so long as the child is doing well.

When the time arrives that some institution in Brooklyn shall be in such financial condition that sterilized milk, or sterilized cream mixtures, or peptonized milk, as may be indicated, can be delivered daily to the door of any or all of our patients and at a moderate cost, then will the prophylactic treatment of intestinal diseases in infancy have taken a long step toward success in this city.

Another important matter is the necessity of promptly caring for slight ailments that may occur during the hot months, especially those of the digestive tract. Probably sometime toward the close of the next one hundred years will the public mind be ridden of the idea first deeply instilled by the profession, and still held, I believe, by some in the profession, that a slight diarrhœa or moderate gastric irritability are the *normal accompaniments of dentition.* When that time arrives there will occur also a sharp decline in the summer mortality.

Turning now to the general management of intestinal disease in early life during the attack, and considering first the diarrhœa of bacterial origin, our treatment should be directed along two lines, viz.: 1st, toward checking the local fermentative processes and their resulting irritation; 2d, toward improving a systemic condition of the patient that is analogous to septic fever. In the way of hygienic treatment, all that has been said regarding prophylactic hygiene is applicable here. Abundance of out-door air, except in the hot part of the day, should be insisted on even during the height of an attack. The purer and fresher the air the better; hence, sea air or mountain air should be selected if possible. While out of doors, as well as indoors, the patient should be kept as quiet as possible, either in a baby carriage or hammock. The child should not be allowed to walk, to creep, nor be tossed about in arms.

The clothing should be loosely applied and should be of the thinnest and lightest material consistent with the daily atmospheric changes of temperature The debilitating effects of high temperature, both that from without and that due to febrile movement, should be prevented and relieved by frequently repeated cool bathing, as in other fevers. To meet the same end, the use of cracked ice and cool demulcent liquids internally should be directed.

In taking up the question of the dietetic treatment of summer diarrhœa, we enter a field of the greatest importance; more so than is the treatment by drugs; this is, however, oftentimes a difficult point to cause mothers and nurses to appreciate. If, when a case of fermentative diarrhœa presents itself, there is evidence of great bacterial activity within the canal, all milk, whether human or animal should be absolutely withheld for a time, about twenty hours in the case of human and forty to sixty hours when cows' milk is being taken. During this time the child should be given fluids freely to enter the circulation and compensate for the blood-serum lost by way of the bowel. These fluids should be pure, or mineral water, containing in suspension a moderate amount of animal or vegetable albumen, with a little sugar of milk, but on no account should any form of fat or free starch be allowed during this fasting period. Rice- or barley-water, egg albumen, pure gluten or gum acacia suspended in abundance of water may be employed. In some cases it will be found that albuminous decomposition is excessive, when dextrine, dry malt extract, or malt and milk sugars should be added to the water.

As the condition of the stools improves, the septic manifestations subside and gastric equanimity is restored, the nursed baby should be cautiously re-applied to the breast at long intervals, during which thirst may be assuaged by the frequent use of the drinks above mentioned. Care should be exercised lest the child wean itself during the period of abstinence. In the artificially-fed, the mixtures above mentioned, in gradually increasing concentration, together with animal broths, expressed juice of beef, with small amounts of gluten and dextrine "baby foods," should take the place of milk, for at least three days.

As cows' milk is gradually restored to the dietary, it should not only be sterilized but should be carefully modified to suit the case, by free dilution with barley- or gluten water, by the addition of considerable alkali, preferably lime-water, and sometimes by complete or partial peptonization.

From this brief outline of the hygienic and dietetic treatment, it will be seen that most careful and vigilant attention to the minutest of details is absolutely required both on the part of physician and attendant, if success is to follow.

Coming now to the medicinal treatment, in all cases where inflammatory action has not become established, our remedial agents should be directed toward first emptying, then rendering aseptic the gastro-intestinal canal during its entire length. To accomplish these ends, we may first employ mild emetics and cathartics, or stomach-washing and intestinal irrigation, following these agents by the use of antiseptic drugs. It is not my purpose to discuss these methods and agents at length, as recent literature upon the subject is full and complete. I would simply say that personally I consider stomach-washing a procedure of doubtful value and difficult to apply in private practice, but that irrigation of the rectum and colon with large quantities of warm salt solution, with or without a mild antiseptic, such as borax, I have often seen followed by the happiest results.

As for drugs that are suitable for exhibition in this disease there is much that might be said for, and very much against many of the drugs that are in habitual use by the profession.

To again offer a personal opinion, I am certain that in the earlier days of an attack more can be done with calomel in frequent minute doses to check vomiting, improve the secretions and cleanse the canal, than with any other drug known. It should be discontinued after a day or two, and then should be exhibited the two drugs that are used by me to the almost entire exclusion of all other intestinal antiseptics and sedatives. I refer to salol and the subnitrate of bismuth, the latter in large and frequently repeated doses. It is suggestive to note that most of the writers who loudly sing the praises of some new antiseptic for the intestine recommend that it should be given *combined with bismuth.*

Although bismuth is but mildly antiseptic. its soothing and slightly astringent action makes it of great value to evenly and continuously deposit along the entire intestinal canal. Of all the numerous antiseptics that have been suggested salol is probably the only one that is not decomposed in the stomach and absorbed from that organ, scarcely reaching the intestine at all.

In our zeal to destroy or limit the activity of the colonies of bacteria that inhabit the bowel in this disease, we should not neglect to devote careful attention to the general condition of the patient. To diminish general and local irritability, to diminish over-active peristalsis that remains after the contents of the canal are in a fairly good state, and to sustain the heart, very minute doses of some opiate are oftentimes clearly indicated. To lessen the pyrexia some of the coal-tar derivatives may be employed, but cool sponging, the cool bath, or the wet pack are much to be preferred, except where the ignorant prejudice of the parents makes the use of cold water as an antipyretic difficult. To sustain the failing vital powers cardiac and nerve stimulants are required, especially if the symptoms approach the choleraic type. If there is marked toxine poisoning—true cholera infantum—then in addition to the salol and bismuth for local action, the hypodermic use of minute doses of morphia and atropia is often followed by good results, as there is no absorption from the gastro-intestinal tract.

DISCUSSION.

Dr. Bartley:—I did not intend to discuss this paper, but there are one or two allusions in it that I feel like saying a word or two upon, and that is the question of the possibility of overcoming some of the objections to sterilized milk that I presented a year ago. One is the possibility of preventing the total coagulation of the albuminoids by the sterilization. I have made some experiments since that time to obviate that difficulty. One was referred to in a paper which I read at that time, and later I tried some experiments with the idea of seeing how much sterilization could be obtained by the use of the pasteurizer. The philosophy or operation of the pasteurizer is to spread the milk out in a very thin sheet in a steam kettle, and then after passing a certain distance at a known temperature, to suddenly chill it back to the cold temperature at which it started. That is, in the course of three minutes time the milk has passed from the ordinary temperature of 50° to 155° F., and back again to 50° or below that. The effect of the sudden change of temperature upon the bacteria is supposed to be something like the sudden change of temperature on individuals—rather debilitating—and that the sudden change would sterilize further than a gradual raise of the temperature up to a higher point and then bringing it back. Unfortunately for the apparatus imported into this country, and from which a great deal was to be expected, it was not successful in this respect, because, after passing the milk through the sterilizer it was passed over the outside of the cooler and exposed to the air and there was the possibility of as many bacteria getting into it then as were removed by the sterilizer. I have since that time tried experiments with sterilizing milk at a temperature just below that necessary to coagulate the albuminoids, in a hot oven. I found it was possible, by keeping the milk at this temperature for one hour, and after a few hours heating it up to that temperature again for an hour, that it was possible to keep the milk for some time. It was not, of course, completely sterilized, and even at that temperature the sugar changes and the milk turns yellow.

I would say in regard to this sterilizing apparatus, sterilizing milk at a temperature just below the point at which the albumen begins to coagulate, that the taste if done quickly is not affected by the sudden change of temperature up to that point and the keeping power is prolonged to from forty-eight to sixty hours, while the original milk not so treated would sour in eighteen to twenty-four hours.

I made duplicate tests and in one of the tests where it was taken directly from the sterilizer and not exposed to the air afterwards, but put into sterilized bottles and plugged with cotton, the milk kept for seventy-two hours. This is a great gain in keeping the milk and it seems to me that it is of considerable benefit.

So far as the use of sterilized milk is concerned, I have come to the conclusion that it is not a panacea. The only case of cholera infantum I had last summer was one that was fed with sterilized milk. On the same day I had another child in an adjoining house that was seized with very severe inflammatory diarrhœa—which does not amount to cholera infantum, there not being that collapse,—and the same day served from the same wagon I had another child in another neighborhood, who was taken violently ill. There was something the matter with the milk that particular day, so that in that respect it is not an absolute preventive. The milk was sweet that day so far as could be determined.

There are so many other factors, which have been brought out in these papers, that come in to take part in the production of this disease, that merely getting rid of one of them will not prevent all these cases, and I am inclined to think they cannot all be prevented. I am not quite so sanguine as the writer of the last paper in believing we can prevent all these cases. The one factor of heat is an important one, though not the sole one. That is a matter which I wish we could control, but I am sure we cannot. I have thought of an experiment and I want to offer the suggestion to some of the gentlemen in hospitals to try fitting up a room with some coils of pipe; some of those hospitals near a brewery, where they can try the freezing machine and artificially cool the air of a ward in the hospital, and open that ward to the city that we may send some babies there as an experiment to try the effect of cooling the air in the room in that way instead of sending them to the seashore. Of course the air would not be as beneficial as the sea air, but I think we could get a good deal of benefit from such a line of treatment. I am sorry that I am not so situated as to be able to try it myself. Sterilizing the milk and cooling the air about the patient, without at the same time increasing the moisture in it, I think might do a great deal.

I am thoroughly convinced that cleanliness is very important, and in the Sheltering Arms Nursery I have had a chance to see the effect of one or two little things which seem of importance. One is, insisting that the children shall be taken out of the wards to change their linen; this gets rid of the contamination of the air, which I believe is important.. Another is, the thorough disinfection of the air and walls of the wards where babies are kept, at least once a week. This is done with chlorine and has an important bearing in preserving the health of the children. In the last three years in that institution we have not had a death from the ordinary summer diseases. There has not been certainly in the last two years, and I think not in three years, a case of inflammatory diarrhœa or what is ordinarily known as summer complaint. No death from a case of summer complaint and very few cases, certainly not more than one or two cases in a year, which is certainly a very good record. The difficulty with sterilized milk is that very young children will not thrive on it.

The question of the disinfectant to be employed to disinfect the intestine was mentioned in the paper. We all have our wrinkles and hobbies, but I am inclined to think it is very difficult to disinfect the intestines and I am borne out in this by my own clinical experience and that of others. Salol among the disinfectants is perhaps one of the best—it is not the only one, however. I employ myself the benzoates, for the reason that I have become a little bit chary in the use of these hydro-carbon compounds. Salol passes through the stomach undecomposed, but the moment it strikes the bile it decomposes into salicylic acid and carbolic acid. If we accept that statement and give large doses of salol, how much damage is done by the carbolic acid and how much damage is done by the salicylic acid in interfering with the normal digestion. It checks the action of ptyaline, of pepsin, of pancreatin and disturbs and hinders digestion while it is trying to kill the bacteria. Is it not as well to let the bacteria alone as to destroy the digestion in the attempt to kill them? The benzoates, however, in passing through the body are excreted in the form of benzoic acid or hippuric acid. Hippuric acid is a normal ingredient of the urine and can pass through the kidneys without irritation. Salicylic acid and carbolic acid are both strong irritants of the epithelial cells of the kidney. I am of the opinion that the administration of these hydro-carbons, these aromatic compounds of coal tar which pass through the body without decomposition, as most of them do, do considerable damage in passing through, and I feel like being a little careful in the promiscuous administration of these remedies. For the reason given I am inclined to the benzoates.

Dr. Hutchinson:—The principal points brought up in the discussion were from Dr. Bartley, who went on to show that sterilized milk is not the proper thing and cited a case which proved fatal, in which a diet of sterilized milk was given, yet I did not hear him suggest anything as a substitute for sterilized milk to use during the summer months as a prophylactic. I agree with him and intended to say in my paper that sterilized milk is not the best substitute for human milk, or the best substance for artificial food the year round. I do not think sterilizing is necessary for nine months out of the year, but for three months at least it is of great mportance, and even if the children may not gain weight and thrive during the three months, I am contented if they hold their own. My experience shows that they will do this on a diet of sterilized milk if continued right through the summer. As to what is better to use, I have yet to learn.

The other point, that the high atmospheric temperature was an important ætiological factor of course we all admit, and the experiment he mentions would be exceedingly interesting and no doubt successful, and yet it seems to me we can get almost the same effects by bathing the child in a cool bath many times a day and clothing the child with the thinnest clothing consistent with the meterological condition; by these methods that factor, I think, could be largely eradicated.

As to the drugs mentioned. That salol when it is decomposed produces free carbolic acid is true; we are so taught, yet the amount set free from an ordinary dose of salol is not large enough to do any harm at all, but has some considerable disinfectant action during its course down the tract and the salicylic acid has its whole action as a germicide, likewise, in the intestine.

As to the benzoates, my experience is that they almost invariably, in what I consider proper doses, have caused considerable gastric disturbance, and that vomiting is more often produced by them than from the use of the drugs mentioned. But as the doctor says, we all perhaps have little prejudices towards certain peculiar lines of treatment.

A CASE OF SYMPHYSIOTOMY.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children, Long Island College Hospital.

On September 30th, by the courtesy of Drs. Hunt and Carley, I was requested to see the following case of difficult labor. On reaching the case, about 7 P.M., they gave me the following history: The patient, a healthy, robust woman twenty-two years of age and a primipara had fallen in labor at one o'clock in the morning. At 10 A.M. the occiput appeared at the vulvar orifice. For two or three hours from that time the pains were of the most vigorous character but the head remained fixed in the grasp of the pelvic outlet. Attempts to extract with forceps had been of no avail. The instrument could not be locked upon the head. While all else was obviously ample there was a marked transverse narrowing of the outlet, the bisischial diameter measuring about three inches. To deliver the child intact through this space was clearly impossible. Craniotomy could have been easily done without risk to the mother, but the fœtal heart was still strong though the rate was somewhat rapid, ranging from 150 to 170 to the minute. The mother's pulse had not risen above 100 and the temperature was substantially normal. All shared alike the repugnance to the sacrificial operation. All including the friends of the patient, assented to symphysiotomy. The operation was clearly indicated—a less formidable one than Cæsarean section and in the conditions present quite as promising for both mother and child. The necessary instruments were sent for but the messenger lost the way and the operation was delayed till 9.30. During the intervening time the fœtal heart had not apparently lost force nor had it increased in frequency. The pubes had been shaved and carefully cleansed and was for about two hours kept carefully covered with a compress wet with a 1–2000 mercuric iodide solution. An incision of about an inch-and-a-quarter in length was carried down to the upper end of the symphysis. A strong probe-pointed bistoury was then passed down behind the joint, keeping the point pressed strongly against the symphysis. The joint structures were cut through mainly from behind forward, and partly from below upward, the knife being withdrawn as soon as the bones were felt to give way. Delivery was then easily accomplished. The head was shelled out by the fingers in the rectum while powerful pressure was applied above the pubes. The wound meantime was protected by a few layers of sterilized gauze wet with the mercurial solution. The separation of the joint did not apparently exceed an inch. On examination the bladder and urethra were found uninjured. The incision through the overlying soft structures was closed with silk sutures and the wound dressed. The vagina was douched with the mercurial solution followed with a plain water douche and the introitus and vulva dusted with iodoform. The pelvis was immobilized by a firm muslin bandage. The uterus contracted well, the bladder emptied itself on the following morning and the patient up to this time has scarcely had a bad symptom and is making a perfectly satisfactory recovery.

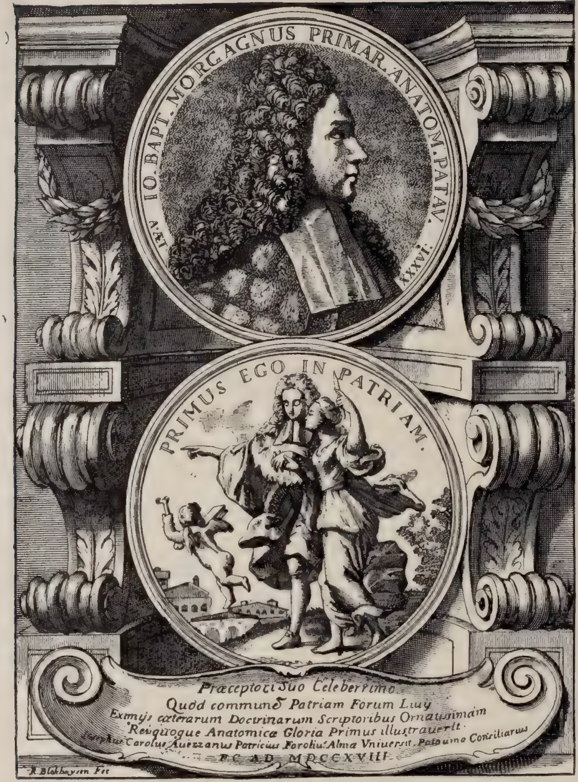
The child, which was a well-developed male, was resuscitated with little difficulty but died at the end of about twenty-four hours from the effects of the long-continued pressure, mainly from cerebral injuries. The head was enormously disfigured. The position was a left occipito-anterior. A deep sulcus extended from the top of the right auricle to the front of the bregma, corresponding to the position of the right ischio-pubic ramus. The occipital pole beyond this line had been moulded to a long, narrow cylinder. There was also a marked asymmetry of the face. On the following day the occipito-mental diameter measured six-and-a-half inches, the occipito-frontal five-and-a-half, the biparietal three-and-a-half, the sub-occipito bregmatic circumference thirteen-and-a-half inches.

In conclusion I may say that owing to the prolonged pressure of the head at the outlet, the condition of the passages was not promising for symphysiotomy. The obviously impaired viability of the child too would have been sufficient justification for craniotomy, but as the fœtal heart was fairly strong at the time of operating, we preferred the course pursued rather than the only alternative of taking the child's life, or what we regarded as still worse, the subterfuge of waiting for it to die.

The condition of the mother could not have been more satisfactory had the child been extracted by craniotomy—the incision shows no sign of infection though the patient has not wholly escaped the effects of the prolonged pressure at the lower portion of the birth-canal.

This, so far as is known, is the first symphysiotomy in America. Three days later a similar operation was done by Prof. Barton G. Hirst of the University of Pennsylvania.

Dr. Robert P. Harris, to whom we are indebted for the revival of symphysiotomy in this country, has kindly given me the statistics of the modern antiseptic operation as follows: Total 51. 22 during the present year. Paris 11, Italy 6, Germany 3, U. S. A. 2. No death in the last 33 consecutive cases.


IO. BAPT. MORGAGNUS PRIMAR. ANATOM. PATAV. ÆT. XXXVI.
PRIMUS EGO IN PATRIAM.
Præceptori Suo Celeberrimo.
Quod communem Patriam Forum Livy
Eximijs cæterarum Doctrinarum Scriptoribus Ornatissimam
Reique Anatomicæ Gloria Primus illustrauerit.
Josephus Carolus Auezzanus Patricius Foroliu. Almæ Vniuersit. Patauinæ Consiliarius
P. C. A. D. MDCCXVIII.
R. Blokhuysen Fec

JEROME MERCURIALIS,

called Jerome, because he was born on the day of the festival of the saint of that name; and Mercurialis, on account of his great success as a practitioner of the healing art, causing the appreciative populace to salute him as the son of Mercury.

He was born at Forli, a small Italian village; of parents of great social standing in his native town, in 1530.

He was educated at Padua, receiving his doctor's degree, in 1555, after which he returned to his native village, and began the practice of medicine with great success; and achieved not only great reputation on account of his professional skill, but also the greatest civic confidence of his fellow citizens; inasmuch as they sent him on an embassy to the Pope at Rome, where he attracted the notice of Cardinal Alexander Farnese, who prevailed upon him to become a member of his family; which place he filled for seven years, devoting himself to study and the production of his learned and elegant work: *De Arte Gymnastica Libri Sex*, a quarto volume, published in Venice in 1569; the merit of which occasioned his being called to the chair of medicine in the university at Padua. His work in this university brought him such renown that the Emperor Maxmillian II., being dangereusly ill, prevailed on the authorities at Padua to send Mercurialis to Vienna, with the hope of restoring him to health; and his treatment was so successful that he returned loaded with valuable presents, including a chain of gold "of great price," two horses from the emperor's stable, and a large sum of money, to which were added the dignities of knight and count palatine, besides gold medals and other gifts to his attendants.

After having taught 18 years at Padua, he was removed to a professorship at Bologna, which has been partly attributed to an error of judgment, which had been committed by him and Capivacci, several years before, when they were called to Venice, on account of the plague which had begun to show itself in that city. On this occasion both he and his colleague seem to have fallen into the mistake sometimes made, even in our day, of denying the existence of contagion; and their councils were said to have been productive of an extensive mischief, as similar errors of judgment have been in the present plague. Nevertheless, his reputation appears to have been soon regained, for he was invited by Ferdinand, the grand duke of Tuscany, to settle at Pisa in 1599, where he was ordered a stipend of eighteen hundred golden crowns, which was ultimately raised to two thousand. This professorship he held with great honor to himself and the university, till his death, which occurred in 1606. A biorgrapher tells us how "He who had given to the world rules for the preservation of life, found himself sinking with a malady, the character of which he well knew, but could not relieve. Feeling that his end was near he called his physicians about his bed, and ordered that his body should be opened after his death, assuring them that they would find in his kidneys two stones which were the cause of his trouble." The autopsy revealed what he had predicted; two large calculi, and several smaller ones, amounting in all to eight drachms in weight.

He was interred with great honors in a chapel which he had himself erected in his native village, and the inhabitants erected a statue in their public place to the memory of the man who had done so much for their honor." He left a large property, including a valuable colletcion of pictures, and he made a great number of charitable bequests.

Mercurialis was a voluminous writer, a learned commentator on Hippcrotes, a classified collection of whose works he edited; but like most of the learned of his age, he was bigoted to the doctrines of the ancients, and fond of hypothetical reasoning, to the disparagement of sound observation; and he strongly imbued his pupils with the same erroneous principles. All his works have been several times republished, and some of them were selected after his death and published together under the title of "Opuscula Aurea et Selectiora," Venice, 1644, folio.

The portrait accompanying this brief biographical sketch, represents Morgagni, at the age of thirty-six, while professor in the university at Padua, and is the frontispiece to his "Liber Responsorum et Consultatiorum Medicinalium," published at Balle in 1588; besides which there is in the writer's library an English edition of his "Seats and Causes of Diseases, Investigated by Anatomy," translated by Benjamin Alexander, M.D., published in three quarto volumes, at London, in 1769.

J. H. H.

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EDITORIAL.

SYMPHYSIOTOMY.

We desire to call special attention to the paper of Dr. Charles Jewett published in this number of the JOURNAL, in which he reports the first operation of symphysiotomy ever performed in America. It is a source of deep gratification that Brooklyn has the honor which always attaches to the first performance of an operation which promises so much as does this one of symphysiotomy. We congratulate Dr. Jewett on his success.

◆

DIRECTORY OF RESORTS FOR WHOOPING-COUGH.

Dr. J. H. Musser, in a paper read before the American Climatological Association last year on whooping cough, makes a most valuable suggestion which seems to us worthy of the attention of the committee having in charge the Directory for Nurses. He refers to the difficulty of finding accommodations in the country, at the seashore and elsewhere, for patients suffering with whooping-cough, and his suggestion is that a central bureau should be formed in every city at which could be registered the addresses of those who would be willing to receive such patients. He regards the removal of children suffering from pertussis to an aseptic atmosphere as one of the most important indications of treatment. Is such a bureau desirable in Brooklyn, and if so could the Directory undertake the work of registration?

THE ASSOCIATED PHYSICIANS' AND SURGEONS' MONTHLY.

The first number of this new publication appeared in September. It is a journal "devoted to the financial interests of practitioners throughout the United States," and is published by "The Associated Physicians and Surgeons of North America." This association is incorporated for the purpose of transacting the business affairs of medical practitioners and already has a large number of members. It is certainly "a consummation devoutly to be wished," when physicians can collect the debts that are due them, and when they can attend to the scientific and philanthropic part of their profession, and be divorced from the earthly and debasing duty of collecting enough from what by right belongs to them to keep soul and body together. In the olden time the physician received an honorarium, he never charged a fee, and we have no doubt but that the profession would stand higher in the public estimation were the business portion of the relation between physician and patient managed by some one besides himself. It is certainly beneath the dignity of our noble calling to be required to present an itemized bill or to be asked to explain how it is that five visits are charged in a given month, when only four are remembered by the patient. We heartily wish the success of this new enterprise, but have seen so many futile attempts made to bring about the same result, that we may be pardoned for being just a little sceptical.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the society rooms, 356 Bridge St., on Tuesday evening, September 27, 1892, at eight o'clock.

The President, Dr. Z. T. Emery, in the chair.

There were about 100 members present.

The minutes of the June meeting were read and approved.

The council reported favorably upon the applications of Drs. Herman L. Armstrong, Jennie C. Farrell, Francis J. Magilligan, James Wood, James A. Donohue, and Wilbur H. Seymour, and recommended that they be elected to membership.

The council also reported that at their last meeting the president had been empowered to appoint a committee to confer with the Health Officer on the subject of cholera, and the publication of the details of the recent special meeting on that subject; and that the president had appointed as such committee, Drs. Sternberg, G. W. Brush, J. H. Raymond, J. W. Fleming, and W. H. B. Pratt, who had conferred with Dr. Griffin.

On motion, the report of the council was approved and adopted.

The following having been favorably reported upon by council were declared elected to membership:

Drs. J. H. Lawrence, R. C. F. Coombs, George E. Reed, Edward Morgan, A. L. Shearman, and Charles D. Napier.

The following propositions for membership were presented:

Dr. John W. Moore, 444 Pacific St., 1892; proposed by Drs. Herbert C Rogers, and J. H. H. Burge.

Dr. Geo. H. Pierce, 76 St. James Place; Yale Medical School, 1886; proposed by Drs. J. B. Bogart, Z. T. Emery.

Dr. J. Elliot Langstaff, 109 Lincoln Place, Toronto University, 1878, Edinburgh, 1883; proposed by Drs. Geo. D. Barney, Z. T. Emery.

Dr. Geo. Conterno, 283 Ryerson St., L. I. C. H., 1891; proposed by Drs. Geo. D. Barney, Z. T. Emery.

Dr. Theodore E. Townsend, 277 Patchen Ave., L. I. C. H., 1891; proposed by Drs. Geo. D. Barney, Z. T. Emery.

Dr. W. A. Berendsohn, 142 Bergen St., L. I. C. H., 1891; proposed by Drs. J. H. Raymond and Geo. McNaughton.

Dr. Louis L. Nichols, 329 Macon St., L. I. C. H., 1890; proposed by Drs. Benj. Burroughs and G. R. Butler.

Dr. H. J. Knapp, Kings Co. Hospital, proposed by Drs. John L. Macumber, and G. A. Evans.

SCIENTIFIC BUSINESS.

The following papers on the various aspects of "Malaria" were presented:

1. "Types of Malaria as seen in Brooklyn." By Gordon R. Hall, M.D.

2. "The Nervous Affections that may arise from Malaria." By William Browning, M.D.

3. "Micro-organisms found in the blood in Malarial Fevers." By Arthur C. Brush, M.D.

4. "Treatment of Malaria in Brooklyn." By Geo. E. Law, M.D.

5. "Relations of Water Supply to Malarial Infection." By E. H. Bartley, M.D.

Dr. Bartley's paper contained the description of an experiment which he had made, in which he had injected a pure culture of the residue of Brooklyn water, collected in a Pasteur filter, into the blood of pigeons, who in a short time manifested unmistakable symptoms of malaria. He also stated that he was arranging to repeat the experiment on a larger scale.

The president said he thought he but voiced the sentiment of the society when he asked Dr. Bartley to report further on this subject at the next meeting.

Drs. J. D. Sullivan, J. M. Van Cott, Jr., and Homer L. Bartlett, discussed the papers.

UNFINISHED BUSINESS.

Dr. J. W. Fleming presented the report of the Obituary Committee on the death of Dr. Charles E. De La Vergne.

NEW BUSINESS.

The chair announced the death of Dr. Elmer F. Berkele, in California, August, 1892, and appointed the following Obituary Committee: Drs. Sanderson and McCorkle.

The death of Dr. H. F. Fearn was also announced, and Drs. Geo. R. Kuhn and Terhune appointed an Obituary Committee.

Dr. J. B. Mattison moved that the librarian be instructed to subscribe to the *Medical Record*, the subscription to begin at once.

This motion was seconded.

On the statement of the librarian to the effect that the *Medical Record* had refused to exchange with THE BROOKLYN MEDICAL JOURNAL, an amendment was offered to lay Dr. Mattison's motion on the table. The amendment was seconded. Some discussion was had and a vote being taken on the amendment it was declared lost.

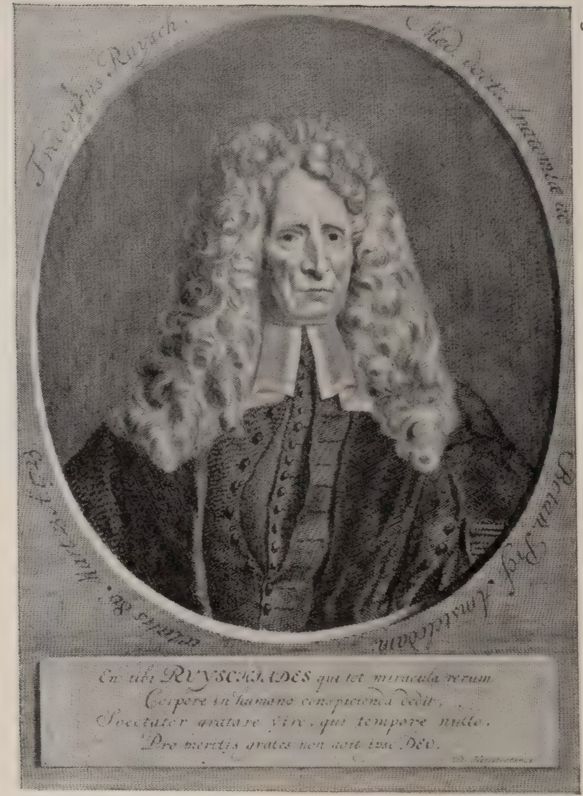
The original motion was then put and carried.

On motion the meeting adjourned.

DAVID MYERLE,
Asst. Secretary.

NEW YORK STATE ASSOCIATION OF RAILWAY SURGEONS.

This association will hold its second annual meeting in the Academy of Medicine, New York City, November 14, 1892. The profession is cordially invited. Geo. Chaffee, President.


Fredericus Ruysch.
Med. doct. Anatomiæ et
Botan. Prof. Amstelodami.
En tibi RUYSCHIADES qui tot miracula rerum
Corpore in humano conspicienda dedit;
Spectator gratare viro, qui tempore nullo.
Pro meritis grates non agit ipse DEO.

FREDERIC RUYSCH,

The Father of Minute Anatomy,

was born at The Hague, where his father was an officer of the States-general, in 1638. He received his degree of doctor of medicine at Leyden, in 1664. During his pupilage he must have been specially noted for his skill in practical anatomy, for we find that he was applied to by Sylvius and Van Horne to assist them in combatting the audacious and calumnious aspersions with which Bilsius had attacked them. It was in making these studies that he devised and developed the methods of demonstration of minute animal structures for which he is so well known, and which gave greater precision and a new impulse to anatomical research.

After taking his degree, he returned to The Hague, married and settled down to the diligent practice of his profession; but the publication in the following year of a little book on the valves of the lymphatics, which contained the result of his inquiries while engaged in the dispute with Bilsius, which so completely established his character as an anatomist of originality and research, that he was invited to take the chair of anatomy at Amsterdam, an invitation which he gladly accepted, and anatomy, both human and comparative, henceforth constituted the principal object of his life; he spared neither time, labor nor expense for the attainment of his purpose; he was almost continually employed in dissection, and not only examined with the most minute exactness every organ of the human body. but devised means by which to facilitate the detection and demonstration of the different parts, and to preserve and exhibit them thus demonstrated.

Before his time De Graef had injected the spermatic veins with mercury and variously-colored fluids, and Swamerdam had employed melted wax, with other ingredients, to inject the small vessels: but by improving their ideas of using substances which, though solid, may be rendered fluid at the period of injecting, Ruysch carried this art to the highest perfection.

Scarcely a part of the human body eluded the point of his syringe, and, as he was enabled to demonstrate the arrangement of minute vessels in the interior of organs which had escaped the scrutiny of previous anatomists, his discoveries were proportionately great. His account of the valves of the lymphatics, of the vessels of the lungs and their minute structure, his researches on the vascular structure of the skin, of the bones and their epiphyses, and their mode of growth and union; his observations on the spleen, the glans penis, the clitoris, and the uterus impregnated and unimpregnated, were but a limited part of his anatomical labors.

He studied the minute structure of the brain; he demonstrated the organization of the choroid plexus; he proved the vascular structure of the teeth; he injected the dura mater, the pleura, the pericardium and peritonæum; he unfolded the minute structure of the conglomerate glands; he investigated that of the synovial apparatus placed in the interior of the joints, and he discovered several curious particulars relating to the lacteals, the lymphatics and the lymphatic glands.

These discoveries were not all unknown to other anatomists, for Ruysch was not a reading man, and he was therefore ignorant of the work of others, and sometimes claimed as his what other writers had described.

His collection of injected anatomical specimens was marvelous, the finest ramifications of the capillary vessels being filled with the colored fluids so as to represent the freshness of youth, and to represent sleep rather than death. In this way he had preserved fœtuses in regular gradation, as well as young and adult subjects, and animals of all sorts and countries.

The indefatigable anatomist immediately commenced the labor of supplying its place by a new collection. The loss of his son Henry, who was himself an able practitioner, well skilled in anatomy and botany, and materially assisted his father in his publications, inventions and experiments, deprived him of his best assistance.

Ruysch was the author of many works, which were collected and published at Amsterdam in 1721, under the title of "Opera Omnia Anatomice-Medico-Chirurgica," from the first volume of which the portrait illustrating this sketch is taken.

J. H. H.

THE

BROOKLYN MEDICAL JOURNAL

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ORIGINAL ARTICLES.

No paper published or to be published elsewhere as original will be accepted in this department.

HOW PHYSICIANS PRESCRIBE PEPSIN.

BY R. G. ECCLES, M.D.

Pepsin is probably the most sensitive remedy the physician prescribes. Its range of incompatibles covers very nearly the whole materia medica. There are but few substances that do not in some degree arrest its proteolytic power, and yet it is prescribed frequently in utter disregard of its most glaring antagonisms, and almost constantly without thought of its minor inhibitors. Unless one has paid close attention to the subject the best rule to follow is to prescribe it alone or with some substance known not to seriously affect it. Sugar of milk, glycerine, dilute acids or alcoholic solutions, known not to contain over 20 per cent. of alcohol, are the best. Even this small amount of alcohol is slightly deleterious. As a fair illustration of how pepsin is treated by some Brooklyn physicians, the following prescriptions have been taken from the files of a drug store in this city. They represent all those that called for pepsin during the period covered, except such as were repeatedly ordered by the same physician under merely slight modifications. The most flagrant violation of all rules regarding the administration of this substance was found in the following from a gentleman in good standing among the profession :

℞ Pepsinæ Sacch.................. ʒi.
Sodæ Bi-Carb.............. .... ʒss.
M. Ft. Chart. №. xv.
Sig. One every three hours.

Whatever the interest of the prescriber may have been, it is safe to say that that patient derived absolutely no benefit from the drachm of pepsin. He might as well have thrown the money it cost into the ocean. If the prescription did any good it was due to the bicarbonate of soda alone. A single grain of the soda was enough to destroy far more than the amount of pepsin prescribed as effectually as if it had been consumed in a furnace. Again, if there had been no sodium bicarbonate present the quantity of pepsin given at a dose was so small that it could at best serve but little better than a placebo. The Pharmacopœia of 1880, following that of an earlier date, called for a saccharated pepsin that would digest fifty times its own weight of albumen in six hours, but it did not order the albumen to be comminuted. With finely-ground albumen the same pepsin will, in the same time, digest nearly ten times the amount it could if the albumen was submitted to it in large pieces. The earlier saccharated pepsins being expected to digest fifty times their own weight of lump albumen were therefore nearly ten times stronger than our modern ones. Manufacturers taking advantage of our new method of using finely-ground albumen, claim to supply a U. S. P. saccharated pepsin, when in fact it is nothing of the kind. All it really digests, when truly gauged by the Pharmacopœia, is five times its own weight of non-comminuted albumen. Many will not even do this. As the quantity of liquid in the stomach bears no such large proportion to the meal as the quantity used in pepsin-testing does to the albumen, another source of deception creeps in. The whole drachm of pepsin of this prescription, had it been given at one dose, could not have digested a single ounce of meat or half of a small egg. But it was given in fifteen doses. three hours apart. Had each powder been left of full strength it would not have digested a bulk of albuminous food much larger than a cherry, and it would have taken six hours to do that. But the stomach that does not digest a meal in less time than six hours is not in prime condition. The next worst prescription came unsigned, as if the prescriber was himself ashamed of it.

℞	Sub-Carb. Bismuth	ʒi.
	American Pepsin	ʒii.
	Bi-Carb. Soda	ʒi.
	Spearmint Water q.s	℥ii.

M. Sig. ʒi every two hours.

Here, again, we have the utter destruction of the pepsin by the bicarbonate of soda. Surely it ought not to take this prescriber long to reach the point where he would turn around and denounce pepsin as useless. If he often serves it this way he can never hope to have good results from its use. Perhaps, however, he credits the pepsin with such good work as happens to be done by the soda or bismuth and hence does not become its enemy. The quantity here ordered is better than the last, and is especially so because he specifies a brand that has in the past ranked above the average. But even here, had the ferment been left in full vigor the quantity was too small to be of any great benefit. The next is scarcely as bad as the two preceding, but does not require a great deal of scanning to see wherein it falls seriously short of an ideal prescription :

℞	Ammon. Carb.	gr. ii.
	Tr. Opii Camph.	m xl.
	Liq. Pepsin (Hawley).	℥i.
	Aq. Calcis. q.s. ad.	℥iii,

M. Sig. ʒi every 2 or 3 hours.

Here we have ammonia carbonate and lime-water enough to more than overcome the acid of the liquid pepsin. All alkaline substances destroy pepsin and therefore the care he took to specify whose pepsin he wanted was in vain. Lime-water and pepsin should never go together, and the same is true of carbonate of ammonia and pepsin. Why he thus strove to get his compound alkaline is a mystery, if he knew anything about the article he was prescribing. In the next prescription we find a blunder of the same kind made by a different gentleman. Here, however, less lime-water was called for and no ammonia carbonate.

℞	Aquæ Cinnam.	℥iss.
	Aquæ Calcis	℥ss.
	Bis. Sub-Nit.	ʒss.
	Pulv. Acaciæ	ʒi.
	Pepsini	gr. xv.
	Spr. Vin. Gallici	ʒiii.
	Syr. Prun. Virg. q.s. ad.	℥iii.

Sig. ʒi every 3 hours.

Evidently these gentlemen were thinking more of the symptoms they wished to combat than about the chemical relations of the mixtures they were ordering.

The next combination is a rather uncommon one. It was evidently intended, like the bicarbonate of soda prescriptions already given, to overcome acidity of the stomach as well as lack of digestive power. If two sets of powders had been ordered the one containing the pepsin, the other the magnesia, and these given in rotation a few hours apart, they would have worked admirably :

℞	Pepsini.	
	Magnes. Albi	aa. ʒi.
	Ft. Pulv. No. xii.	

M. Sig. One powder in water three times a day.

Here the quantity of pepsin in a single dose is five grains, but the quality may be very good or very poor. The druggist can take his choice from any one of the dozens of kinds upon the market. The five grains may be able to digest over twenty thousand grains of comminuted albumen, or it may not be able to digest more than five hundred grains. If the druggist puts in the best it will be forty or fifty times stronger than the poorest. Unless he has tested the different brands himself he has no means of knowing which is the best or which the poorest. Price is no criterion, for one of the poorest is a high-priced article, and one of the very best sells wholesale at a reasonable rate. Nor can the claims of the manufacturers always be relied upon. Usually it is wise to take their florid statements *cum grano salis.*

The next two prescriptions are from the same physician. Usually he is very careful about what he orders with this ferment, but in these cases he touches the verge of danger :

℞	Sodii Benzoat	gr. xl.
	Potass. Bromidi	ʒiss.
	Spts. Ammon. Arom	ʒiss.
	Syr. Scillæ	ʒvi.
	Essence of Pepsin	ʒvi.
	Aquæ ad	℥ii.

M. Sig. ʒi every 3 hours.

℞	Acid. Phosph. (Horsford's)	℥i.
	Pepsin. (Armour's)	gr. xl.
	Spts. Chloroformi	ʒiii.
	Aquæ Camph	ʒiii.
	Aquæ ad	℥iii.

M. Sig. ʒi after meals in water.

If the druggist, in compounding the first of these, should inadvertently add the essence of pepsin before putting in the syrup of squills there would be an instantaneous destruction of the ferment. If the syrup of squills happened to be deficient in acetic acid or the aromatic ammonia had an excess of alkali or alkaline carbonate the same thing would occur. Dispensed of proper strength and in the order given no harm could befall the pepsin from the alkali, but the mixture will contain three salts showing considerable inhibitory power in the proportions ordered. In the second prescription we have the pepsin fortified by the acid phosphate but seriously crippled by chloroform that happens to be a very strong inhibitor of proteolytic power.

The next two are by different gentlemen who have made the same mistake :

℞	Bis. Sub-Carb..................	ʒss.
	Hydrarg. Chlor. Mit............	gr. ii.
	Vini Pepsini...................	℥ss.
	Tr. Opii Camph	ʒss.
	Tr. Aconitæ Rad................	gtt. x.
	Mist. Cretæ ad.................	℥ii.
M.	Sig. Small teaspoonful every 3 hours.	

℞	Hydrarg. Cum. Creta..	gr. ii.
	Pulv. Doveri...................	gr. i.
	Bis. Sub-Nit...................	ʒi.
	Pepsini.................	ʒss.
M.	Ft. Chart. No xii.	

Again we see an attempt to correct the acidity of the stomach, and at the same time administer pepsin. The result is always disastrous to the last-named substance. The chalk probably does not kill the pepsin's power as an alkali would, but it keeps away the acid, without which no pepsin is active. The mercury salts are likewise powerful inhibitors and should never be administered with ferments. The error of the two following is a very common one among physicians, and the prescriptions having been written, the one by an American and the other by a Scandinavian, show how deep-seated a simple physiological misconception can become.

℞	Cerii Oxalatis	℈iss.
	Pulv. Pepsini et Pancreatin.	
	Bis. Sub-Nitr	aa. ʒi.
M.	Ft. Chart. No. xv. One after each meal.	

℞	Lactopeptine...............	℈ii.
	Pepsine (Armour's)...... ...	gr. iv.
M.	Ft. Chart. No. xii,	

Sig. One powder in water every 3 hours.

Pepsin digests and thereby destroys pancreatin, and pancreatin digests and destroys pepsin. Pepsin requires an acid medium to digest in, while pancreatin develops its power in an alkaline one. If the pepsin benefits the patient the pancreatin certainly cannot. If the pancreatin does the work the pepsin is wasted. If the gentleman who wrote the second of these two prescriptions intended to fortify the pepsin contained in the lactopeptine because he believed the patient needed pepsin, then why did he write for lactopeptine at all? It would have cost his patient less had he ordered just what he wanted. If, however, the pancreatin of the lactopeptine was needed then surely he went about getting any good from it in the wrong way. Instead of adding more pepsin he should have asked the manufacturers to leave out what it already contained.

The next two prescriptions represent the least objectionable forms when active drugs must be given with this ferment. The substances, while possessing some slight degree of inhibitory power, have much less than the general run of articles contained in a drug store. The physicians prescribing them are both Americans.

℞ Quin. Sulph................ gr. viii.
Bis. Sub-Nit................ ℈i.
Pulv. Pepsini............... ℈i,
M. Ft. Pulv. No. viii.
One every 4 hours.

℞ Pepsini Puri............... gr. xxx.
Bis. Sub-Nitratis............ gr. xx.
Pulv. Opii....... ... . gr. ss.
Misce bene et fiant chart. No. x.
Sig. One every 3 hours.

There is but one objection to urge against these. The quantity of pepsin is too small. It is not in any sense toxic unless laden with foul bacteria. No pepsin should be dispensed that is not aseptic. A pepsin that is highly insoluble in water and very dilute acid is very likely to be highly infected because of the way it is procured. A soluble pepsin that gives out a foul odor after twenty-four hours in a solution in a warm room should never be used. The dose of pepsin is indefinite. A whole drachm of the most active on the market can be swallowed without injury by an adult. If prompt action is wanted doses of ten grains or more of a first-class article should be given. The right kind of cases respond promptly to such treatment. With patients complaining of sour stomach, pepsin should not be given until that symptom has disappeared either spontaneously or by proper treatment. Where diphtheritic membranes are sought to be removed, the purest and most powerful brands can alone be relied upon for quick results. Where gangrenous wounds are to be cleaned off the same advice applies. A pepsin capable of digesting twenty-five thousand times its own weight of albumen in pharmacopœial time has lately been tested by the writer. Such an article, could it be made at a low rate, would be a powerful aid to surgeons and to physicians who have diphtheria to contend with. Hand in hand with antiseptics they could easily vanquish septic and diphtheritic germs by its aid.

ORTHOPEDICS FOR THE POOR.

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Read by Title at the Sixth Annual Meeting of the American Orthopedic Association, New York, September 22, 1892.

Orthopedic surgery is peculiar in the following respects:

I. It is preëminently the surgery of the poor. The element of malnutrition dependent upon lack of hygiene in our crowded cities underlies a great proportion of the conditions we are called upon to relieve.

II. It is slow surgery. While the time of treatment of almost any other surgical case may be measured in days, weeks, or perhaps months, that of an orthopedic case usually requires years.

III. It is the surgery of minutiæ. The natural tendency of orthopedic as compared with other lesions, is away from recovery. So much greater is the burden laid upon the surgeon, and to so much greater degree do his measures determine the result.

In view then of the facts that the care of these cases involves the closest possible attention to details for a period of years, and that the patients are generally young and helpless and in charge of the poor and ignorant, it is evident that an orthopedic service must differ radically from any other. Provisions must be made, not merely to relieve some acute phase of a chronic process which is all that is usually attempted by a general hospital, but to carry the patient through a long illness and meet its varying demands. Some cases are best treated at a dispensary. Others will do better if treated at home. Others need operative measures or a constant supervision only to be obtained in a hospital. The same patient may at different times require dispensary, home and hospital care. An orthopedic service that does not provide for all these needs is incomplete.

About three years ago, St. Mary's General Hospital in Brooklyn, which had previously afforded only hospital treatment, undertook to meet more fully the orthopedic needs of the city by a service which, though modest in its appointments, should be complete in its scope. As is usual in charitable institutions, the most rigid economy was necessary, and our beginning may be instructive as illustrating how little will suffice for a start. We adopted many of the business methods which had been used for years at the New York Orthopædic Dispensary and Hospital, and the Hospital for Ruptured and Crippled. The dispensary is the principal feature; here the records are kept and the hospital care and service at patients' homes are only adjuncts. The history books contain on the pages to the left printed forms to be filled out with information on the following points: Family history, paternal and maternal; brothers and sisters living, their ages and health; brothers and sisters dead, causes of death; patient's health in infancy; how nourished; previous illness (especially exanthemata); supposed causation of present illness, duration, first symptoms; subsequent course and treatment; present condition, general and local; diagnosis. The remainder of the page and all of the opposite page are used for notes of treatment and progress of the case. A note is made every time the case is seen. For examinations, padded tables, screens, and means of suspension are provided. To make outlines and for the shaping of apparatus, the familiar strip of block tin and press-board are used. For the latter, what is known as number 110 is a convenient thickness A few quires of heavy smooth manilla paper (40x48 in. 125 lbs.) are kept at hand for large tracings and patterns. A stout shears, tape measure, red and blue pencils, cards for the patients and manilla order blanks completed our outfit for examining and recording cases.

The service is for the poor exclusively. In doubtful cases, a note from a clergyman, physician or some other reliable source, stating that the patient is unable to pay for treatment is required. It was expected that, so far as they could, patients should pay for the use of the apparatus, and for this purpose a fixed price, to be paid at once or by installments, was put on each instrument. The result was that some, having secured braces, would, in spite of printed and verbal notice to the contrary, regard them as their own. Then, with characteristic faith in the intrinsic potency of the instruments, they would dispense with further attention. Accordingly the plan of charging a rental of fifty cents per month for each instrument was adopted. An account is kept on the back of the patient's card as well as in the ledger. When satisfactory evidence is furnished that this expense could not be met, the brace is furnished free. Of course we fail to collect a considerable share that is charged, but what we do collect serves to pay about one-third of our instrument account.

In the use of apparatus one working principle adopted is that a brace is simply a tool in the hands of a workman. Patients were not to be sent to an instrument maker for therapeutics, but the pathological changes and the resulting mechanical conditions having been determined, the function of the surgeon was not considered as completed. It is the skill and perseverance with which one meets these conditions by mechanical means personally applied and varied from time to time according to the peculiarities of the case that constitutes the distinctive claim to be considered an orthopedist. The details of mechanical therapeutics are as difficult, and as interesting as are those of the morbid conditions to be antagonized. An orthopedic surgeon must be a mechanic. Though to save his time, he leaves much to be done by a workman, he must be able to dictate the smallest detail of an instrument. One soon learns that the time spent in acquiring personal familiarity with the use of tools, and the properties of various qualities of steel, leather, buckles, webbing, etc. has been employed in getting an essential part of an orthopedic education.

Another and no less important principle is that an instrument to be efficient should give relief. *When an apparatus is a source of pain or discomfort, it is not only not doing good but is probably doing harm.*

In all cases, but especially those applying at a dispensary, simplicity of apparatus is very desirable. We avoided the use of rack and pinion, ball and socket-joints and snap catches and reduced the number of movable joints to a minimum. The simple splint used at the Hospital for Ruptured and Crippled is our model for hip cases. It is a splendid instrument for the purpose, needs little or no repair, and when a patient outgrows it we apply another and have the old one re-upholstered for another patient. When traction is no longer needed, it is used simply as a perineal crutch. The adhesive plaster which has given the most satisfaction is Shiver's spread on twilled muslin. It is comparatively unirritating, and strong enough for any case. The buckles are riveted on; and the plaster is applied many tailed. The leg is rarely washed, except over the knee and other parts which the plaster does not cover. The loose epidermis and accumulated secretions, constituting the "dirt," come off with the plaster. By keeping the skin dry, I believe we avoid the eczema sometimes so troublesome. We have only once had to leave off traction on that account.

For bandage material, as the dressings are to remain undisturbed for weeks at a time while the patient is ambulatory, a very firm muslin is desirable. We prefer the brand known as unbleached "cast iron." The bandage is stitched edge to edge down the front of the limb. To prevent soreness from instrumental pressure, the parts should be bathed daily with alcohol and water, and dusted with fullers' earth or carbolated talcum. These precautions are quite necessary for perinæum and groin in hip cases, and the kyphos in Pott's disease. As an additional protection to the former, where strong traction is necessary and the skin is delicate, a pad consisting of two pieces of sheet lint separated by a thin layer of cotton wadding is very efficient. The wadding takes up the friction that would come on the skin. The dressing is changed once or twice daily. For abscesses a pad of oakum is sandwiched between layers of sheet lint or muslin, and a hole is cut in the centre of the one to be placed over the sinus. One layer of muslin protects the skin, the other the clothing.

The Thomas knee-splint is used to afford protection to the knee and ankle with the addition of special fixation when necessary. For the knee we use the posterior steel support devised by Dr. Judson, or plaster of Paris, and for the ankle, a brace consisting of sole plate and calf plate connected by a posterior bar. The Bilroth sector splints are of the greatest service in overcoming flexion with subluxation in ostitis of the knee. In club-foot, we do not hesitate to tenotomize when the resistance is not overcome by manual force, and generally apply plaster of Paris reinforced by steel, so that the patient can walk on it, (BROOKLYN MEDICAL JOURNAL, November, 1891). Later we used the walking brace described in a recent number of the *New York Medical Record* by Dr. Judson. The Taylor brace without hinge and with high apron, hard rubber pads and U shaped hip band is our usual means of treating Pott's disease. For head support, we employ the Taylor head piece with a detachable chin-cup of hard rubber and occipital uprights to which is fastened a frontal band of webbing. As the case improves, the chin-cup is removed and the frontal leverage maintained. The head-piece is connected with the spinal part by a slide and pivot of soft steel that may be bent to a required angle. For lateral curvature we put our trust in exercise, active and passive, and suspension. For the support of flat-feet we have the following simple and efficient method: We had cast a pair of iron dies between which are struck up on rectangular pieces of 18 or 20 sheet steel the shape of the normal adult sole. We keep on hand a number of these pieces, large enough for any ordinary foot. One is placed under the foot to be supported and the outline scratched on the steel. After being cut to the required shape little or no alteration with the hammer is required. From this one pair of dies we can thus supply soles for large feet or small, right or left. In cases of bow-legs, if the curve is slight and the patient very young, we build up the shoes on the outside. As a more efficient procedure, the braces of Dr. Knight are used. For knock-knee we build up the shoes on the inside, or use a brace of lateral bars without a joint at the knee.

As a matter of economy we made arrangements with an instrument maker to have the greater part of the steel work done in his shop and a man sent on clinic days to make repairs and to fill such orders as did not require the forge or power. For this purpose the following outfit has been provided:

Work-bench; speed-lathe for foot power; two chucks; parallel swivel vise; twenty-pound bench anvil; heavy bench shear; Hall's cutting pliers, seven inches; pair strong plain cutting pliers, nine inches; Stub's hand-vise, four inch; screwdrivers large and small; Stub's broaches 25 and 35; sheet metal gauge; files, 12 inch flat bastard; 12 inch smooth; 8 inch flat smooth; 9 inch half round bastard; 4 inch round smooth; 3 rivet sets; centre punch; solid punch; oil can and oil; 1 ball peine hammer; 1 rivetting hammer; 1 dozen twist drills; ½ gross machine screws, small; ½ gross machine screws, large; taps, large and small; pair 3 inch snips; cold chisels ½ and ¾ inch; 6 inch caliper; steel square, 1 foot; pair compasses; shoe knife; copper rivets and burs, 13, ¼, ½, ⅝ inch, 10 ½ inch, 9 ¾ and 1 inch, iron rivets, assorted sizes; Arkansas oilstone; 7 inch hacksaw and 1 dozen blades; caliper rule; 3 tin gem pans (for holding rivets, screws, etc.); wood screws, 8, ½ and ⅝ inch; 2 pairs hooks for bending steel; Acme wrench 8 inch; iron last on standard with three feet.

We added a few tools from time to time as our needs developed. The lathe is used almost exclusively for drilling, and almost any strong, small lathe will answer. The broaches are handy little tools for enlarging a hole. One size of screw is used for almost all purposes. It is midway between 6 and 7, and has 36 threads to the inch. It is employed very generally by instrument makers.

(Dugro, of Elizabeth Street, makes them of very tough steel). Number 13 is a convenient size of copper rivet for most purposes. The drills are selected to match the screws and rivets. We have also a few bars of steel and some in sheet. The steel is a very weighty matter. It must be soft and tough enough to permit bending, and hard enough to keep a given shape, and retain a thread. Bessemer steel will do for many purposes, it is too soft for others, and it is not easily obtained in small sizes. Spring steel not too high grade does very well. What is known as a 60 to 80 carbon is an ideal steel. Tool steel is too hard.

Since the establishment of this service our work has steadily grown. And it has now become necessary to make provision for the manufacture of all our apparatus. Our new equipment comprises a boiler, five horse power engine, a good engine lathe, a drill chuck, a four jaw independent chuck, forge, grindstone for power, polishing lathe with two emery wheels, standards with polishing wheels and buffs, large anvil, blacksmith's tools, taps, dies, and in fact a fairly complete machine shop. The lathe and forge are arranged for foot power as well as steam, so that odd jobs can be done at any time without delay.

Any brace that requires fitting is tried on and altered as many times as necessary before the padding or leather work is done. The latter we undertook ourselves and the operators had to learn as they went. Dr. Gibney kindly afforded us every facility for getting the practical details of the work at the Hospital for the Ruptured and Crippled. For padding, covering, making of perineal straps and other sewing we have a heavy and a light sewing machine arranged for leather, a cutting board, saddler's knives, punches, awls, and a very convenient little machine for setting hooks for lacings. Buckles and webbing are matters of moment. After some mistakes, we settled upon what is known as a square bar solid buckle and 7/8 extra heavy suspensory webbing for general use. A ¾ inch light linen web, and light brass buckle are also necessary. The leather employed for lining is heavy alum tanned lambskin, and that for outside covering a good quality of russet cowhide rendered pliable by a process known as boarding. Straps of stout bridle leather with buckles to fit and cut soles are kept in stock for the hip splints. Machine silk D or E and heavy linen thread are used for sewing. For padding, waste pieces of kersey from a horse blanket factory serve admirably. We are gradually learning to dispense with padding. We keep on hand a number of hard rubber plates, (misnamed pads) with which to face those parts of the spinal brace that press upon the kyphos. They do not absorb the decomposing secretions of the skin as the soft pads do, and are not so liable to produce sore backs.

Hospital care, though only a feature, is a very important one in an orthopedic service. Though the time for which it is needed is usually very short compared with the duration of the disease, it is a time in which a great deal can be accomplished. Patients are usually admitted for treatment by recumbency, with or without traction, during the acute stage of some bone or joint disease, or while awaiting the preparation or repair of a brace; or because they cannot get the proper care at home; or for operation.

Orthopedic cases in a general hospital when brought into competition, for the time and care of the busy house-staff, with the more brilliant cases of acute surgery are sure to suffer. Even the frequent change of internes is a great disadvantage. An assistant with orthopedic tastes and training is a necessity. In treating patients by recumbency one is impressed by the way they thrive under it even in a hospital ward. It is quite contrary to all tradition. The orthopedic couch which I show has proved itself very useful. Traction is easily applied to either extremity or to the pelvis of the patient and straps can be added to keep the patient from attempting to rise, but with the head weight this is hardly necessary. The child is perfectly comfortable in it and I have thus been able to maintain an absolutely uninterrupted traction for weeks at a time. It is made according to my direction by the Hayden Manufacturing Company, 391 Canal Street, New York City.

As regards operative treatment, I am firmly of the opinion that an orthopedic service should be prepared to meet all the needs of an orthopedic case. The old proverb that it is a poor time to swap horses while crossing a stream, applies here. To refer a patient who has had mechanical treatment to another for operation and to have the case subsequently referred back for mechanical treatment is a division of interest and responsibility that is hazardous of results. For our operative cases tenotomies, osteotomies, excisions, etc., we have found the well-developed antiseptic technique of a general hospital to be of the greatest value. Our records, except those of important cases, are kept in a simple manner. Oceans of valuable time are consumed in these institutions by the internes in writing what no one reads. We use a manilla tag tied to the bed. On this, at each visit, is made a note to serve as a memorandum at the next visit.

In the ordinary medical or surgical cases which apply at our public charities the burden of attendance may be left to the patient.

Not altogether so with our cases. As time, which is very valuable to the poor, passes, and pain and disability are relieved, or the patient gets discouraged, the natural tendency is toward a relaxation of care. This negligence is a source of much disappointment and vexation to the surgeon. But it must be encountered as a fact and these people protected as far as possible from the consequences of their own stupidity and shiftlessness. When a patient remains away for too long a time, a printed notice requesting him to call, and enclosing a postal card for reply is sent. If this is ignored a second and even a third is mailed. And in the absence of any reply an assistant calls to ascertain the cause. Some need only an admonition, others have passed into other hands. In many instances there are such good reasons as contagious disease in the family, or some exacerbation, or intercurrent ailment of the patient, or inability of the mother to leave the home, etc. In these and similar circumstances home treatment is provided. Many can be treated at home by a visit once a week or once in two weeks.

The results of orthopedic surgery can be obtained only by a liberal investment of persevering effort; but they are worth it. The surgeon knows that he has brought them about and the satisfaction is great.

THE TREATMENT OF INJURIES OF THE PELVIC FLOOR AND CERVIX UTERI.

BY ALEX. J. C. SKENE, M.D.,

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Read before the Brooklyn Gynæcological Society, June 3, 1892.

Although much has been said and written during the past twenty years regarding these injuries, which so frequently occur during parturition, there are still some points regarding the matter of treatment that are sufficiently unsettled to warrant one briefly referring to the subject.

In regard to injuries of the pelvic floor, lacerations of the perinæum so-called, there appears to be a division in the profession regarding the relative merits of the different restorative operations. Just now it appears that the honors are divided between Emmet, Tait and Duke, but unequally divided in favor of Dr. Emmet. I have never been able to see how any one method of operating could be efficient in the widely differing injuries of the pelvic floor which come under our notice, such as complete laceration of all the structures in the median line, either down to or through the sphincter, and subcutaneous laceration in which all the tissues are divided from the commissure down to the sphincter ani. I have recently seen a subcutaneous laceration involving the sphincter ani. That form of injury, which must be rare, I described at one of the meetings of this gynæcological society. The notes of the report were lost, and hence I refer to it again. Another, and I consider one of the most important of all injuries, is laceration of the levator ani muscle, and also separation of the muscular wall of the vagina from the pelvic floor. These two lacerations (that is, of the levator ani and the muscular wall of the vagina) usually occur together. I might also say that the last-named injury and lacerations in the median line may occur together, but they rarely do so. Excepting laceration of the sphincter all the other injuries are seen sufficiently often to merit equal consideration.

In order to successfully relieve these lesions by surgical means, an entirely different operation is required to meet each injury. Certainly the ordinary median line laceration down to the sphincter, in which we find scar tissue on either side of the original laceration, requires very different treatment from the laceration which extends through the sphincter and recto-vaginal septum. I have never been able to see how the operation of Tait or Duke could be employed with advantage in some of those median line lacerations. In order to get anything like a satisfactory result, I have always found it necessary to remove all of the scar tissue, and at the same time do some flap-splitting as well. The only condition in which I have found the Lawson Tait operation (that is, so-called Tait operation, for I do not believe that he originally did it) is the subcutaneous laceration in the median line down to the sphincter. In that case all that is necessary is simply to make an incision in the skin and mucous membrane in the median line, or in other words, make a laceration which is subcutaneous, complete, and by separating the skin and mucous membrane far enough and holding them apart, the divided ends of the transversus perinei muscles and fascia can be brought together in the centre and united along with the skin and mucous membrane at the same time. But even in this form of injury I often find it necessary after making the incision in the skin to remove the scar tissue that I find in the cellular tissue between the divided ends of the perinei muscles. Again, on the other hand, I find that even in this operation, which comes the nearest to being like the Tait operation, it is utterly impossible for me to catch up the ends of the muscles and the fascia with the needle and suture used in the way that he does it. Hence, while we hear of his doing that operation in anywhere from two-and-a-half to three or four minutes, I generally find that I have to spend fifteen or twenty. Again, with reference to Emmet's operation, which I look upon as one of the most valuable devices of modern surgery, I am perfectly confident that that operation should be limited to the last form of injury described, *i.e.*, where there is laceration of the levator ani muscles and separation of the middle vaginal wall from the pelvic floor. When I encounter that injury uncomplicated by any laceration in the median line I do Emmet's operation as nearly as I can, excepting that I use silk in place of silver wire, and I do that especially in this operation, because the presence of a large number of metallic sutures inside of the vagina is not well borne. They are apt to cause irritation and suppuration and to become imbedded so that it is difficult to remove them ; indeed, it is exceedingly difficult to remove these metallic sutures, I find, even when they do not become imbedded.

In quite a number of cases I find that it is necessary in addition to doing Emmet's operation to vivify the tissues in the median line and bring together the divided ends of the transversus perinei muscles.

It will be seen from what I have said that in place of being able to cure all of the injuries of the pelvic floor that we encounter in practice by any one operation, I am under the necessity of employing a method of operating to meet the requirements of each injury. I have certainly had experience enough in this branch of surgery to warrant me in daring to say that I have been able to obtain results that are as nearly satisfactory as any that I have seen in the practice of others. It is long enough also since I began to operate, and I have operated a sufficient number of times to give me the opportunity to see how many of my cases behave, in other words, to see the ultimate results of those cases. I may say also that I never consider an operation a success unless the parts have been restored to, or nearly to their original anatomical condition, and the functions of the pelvic floor completely restored, and permanently remain so. On the other hand, I have seen a sufficient number of failures following all the different methods of operating that are usually recognized and practiced in this country. I have seen cases operated upon by the so-called Tait method in which there was simply a restoration of the integument of the perinæum and mucous membrane of the vagina, which is no improvement whatever upon the original injury. I have also seen a number of cases operated upon after Dr. Emmet's method, in which rectocele, cystocele and prolapsus of the uterus followed, showing that the restoration of the pelvic floor was not by any means perfect.

From this I am satisfied that the methods of operating were not adapted to the conditions of the injured parts.

In seeking some explanation of the difference of opinion among surgeons regarding the treatment of injuries of the pelvic floor, I have been led to the conclusion that it arises from errors of diagnosis. It appears to be an easy matter to make a correct diagnosis in this class of surgical cases, but it certainly is far otherwise. A laceration in the median line is easily detected, but subcutaneous lacerations are easily overlooked, especially is this the case in lacerations of the levator ani muscle and the middle wall of the vagina.

I have elsewhere fully discussed this subject and need say no more about it here, except that failure to adapt surgical treatment to the different injuries more frequently arises from imperfect diagnosis than from anything else.

I certainly feel that I will not be misunderstood by the members of this society when I say that I am entirely unable to comprehend such statements as I have many times read in the medical journals, that Tait's operation gives satisfactory results in injuries of the pelvic floor or lacerations of the perinæum, or that one has performed Emmet's improved operation six or seven hundred times with perfect success, immediate and remote. Perhaps these successes that are obtained by some, while others have been and are now, with very limited experience, entirely unable to obtain them by any one method of operating, come from a little relic of ancient medicine which appears to linger in some quarters. The "medicine man" among the Indians has as chief among his therapeutic agents, jumping and howling, and the one who can jump the highest and shout the loudest is considered the greater physician. Perhaps this may be the explanation of the greatness of some of our *confrères* who practice medicine at the present day.

In regard to lacerations of the cervix uteri, I have followed Dr. Emmet, both in his ideas regarding the pathology and the principles of surgical treatment which he discovered and taught us, but I have ventured to deviate a little from his methods of operating because I could, or fancied that I could, improve upon the method to the extent of simplifying it so that it could be performed more quickly and with less difficulty, and hence the method could be more easily taught to others. If all surgeons possessed Dr. Emmet's technical skill as a surgeon, then there would be no need of simplifying methods to obtain the required ends, but as that is not so, one is excusable for any efforts that may be made to obtain easy ways of operating.

As you well know, the modifications which I have made are in removing the scar tissue in the angle and vivifying the tissues by means of the hawk-bill scissors, and in using silk in place of silver wire. Now I can best advocate the use of the hawk-bill scissors by meeting the objection made to it. It is claimed that it is impossible with these scissors to go high enough and remove all of the scar tissue. I can best meet that point by stating that I operated repeatedly in the presence of one of Dr. Emmet's pupils, and certainly one of his most enthusiastic admirers, who said to me when he first saw me operate, and I asked him if he thought I had gone high enough and taken out enough of tissue, "Yes, quite enough to please me, for I thought you had gone clear into the peritonæum; I have never seen as much tissue taken out before in any operation, nor have I ever seen any one go higher up into the uterus than you have just now."

I certainly then can go high enough to be sure not to leave any scar tissue in the upper angle. If I do leave any on the sides it can be removed with the Emmet scissors with facility, but I claim, and know that even if one leaves a little scar tissue on either side, the vivified surfaces are so clean and match so perfectly that when they are held together by sutures, they unite immediately and without exudation; and so I obtain in that way a union and a restoration with less scar tissue than I ever was able to do when I dug out the scar tissue in the old way with the tenaculum and Emmet's scissors, and left the rough surfaces, which did not unite by first intention, but by a large exudate which simply developed scar tissue to take the place, in part at least, of the tissue that had been removed. As another evidence that I can get results that are entirely satisfactory, I may mention the fact that several of my cases have been examined after operation by experts, thoroughly familiar with other methods of operating, and they have not been able to find anything to criticise. More than that, in the record of at least five hundred cases I have only had two that showed any evidence of septic infection. In one of these in my private practice, the temperature ran up on the second day in the afternoon to 103° and there was considerable pelvic pain; on the following day the temperature came down to normal, but again went up in the afternoon. On the next day I gave quinine freely and had no further trouble. The union was quite perfect and I inferred that the whole disturbance was due to miasmatic, not septic influence. In another case that I operated upon in the hospital, who had had decomposing material in the cavity of her uterus, and was suffering at the time from septic infection, an unfortunate condition which I was in ignorance of, the patient did very badly; and although the sutures were removed on the following day and the uterus curetted and washed out, she developed a salpingitis and peritonitis which rapidly proved fatal. These are the only cases that have ever given me the slightest anxiety after Emmet's operation. That I have had some failures, especially in the first two hundred cases that I operated upon, is true, and occasionally, though very, very rarely, I have a partial failure now, that is, while I get results that are entirely satisfactory so far as curing the patient, the cervix is not completely restored to its original form and outline. I may say also that in cases in which there is great hyperplasia, and where I have not time to do the preparatory operation as I call it (I mean those cases where it is necessary to remove a large portion of tissue clear across each half of the lacerated cervix), I occasionally find that the lower portion of the canal is smaller than it ought to be and that some slight dilatation is necessary. This is about the extent of the imperfections that have followed my operations performed in the way that I now practise.

In quite a few cases that I have seen and obtained the complete histories of that have been operated upon after Emmet's method, I find that the temperature has run up on the second or third day, and that it has been necessary in those cases to remove at least the upper sutures and frequently employ warm douches in order to relieve the patient from septic inflammation. In such cases, even if union takes place, there is an amount of scar tissue high up that gives as much trouble ultimately as the original injury.

In view of all these facts I am confident that the average operator will obtain better results by operating as I do.

Some of the statements just made may be a little more positive than is quite becoming, but my object is to call forth discussion which will correct or confirm my views according to their merit.

DISCUSSION.

Dr. Byrne:—This is a very important subject and cannot be too often brought to our notice. I might say, as Dr. Skene has said, that I have also seen many cases where, after operation, the condition of the parts was certainly no better than before, there being merely union of integument and no muscular tissue whatever.

With regard to the Emmet operation, I have seen, as no doubt others have, a great many spoiled operations of that kind, and I see them yet—cases where there is almost complete stenosis of the os tincæ; in other cases a sort of side family entrance and an entire closure of the os tincæ proper, and no entrance into the uterus except on one side, but that must be expected so long as these operations are undertaken by those who are not competent for such work.

I have no experience with the instrument which Dr. Skene has invented and uses, and which he discusses so freely here. I never operate with the scissors, or prepare the parts with the scissors further than to trim. I invariably use the knife or scalpel and dissect out the entire scar tissue up to the vaginal junction and beyond if necessary, and obliquely into the uterine cervix as far as may be necessary, taking it carefully away with the scalpel, making a clean incision. Whether it is because I am accustomed to that method of operating or not I do not know, but I believe I can prepare the parts more satisfactorily than I can by the scissors; my surfaces are in much nicer condition and the union is generally quite satisfactory. Emmet is accustomed to the scissors, and he knows how to use the scissors as few other men do, and I think that much depends on the instrument one is accustomed to use. Emmet's operation for laceration of the cervix, I am confident, has been abused, like many other good things in surgery, and a great many cases have been operated on which would have been better if left alone. I advise against operation unless there is a positive evidence of not only deformity but the indurated condition which indicates the presence of scar tissue. If gentle pressure at any point with the sound or probe creates a great deal of pain, if it is abnormally sensitive, it must be removed how ever little the laceration may be, or there will be no peace. Cases often come to me, and undoubtedly to others, in a wretched condition, the cervix will be swollen and inflamed, the laceration will look very bad and very extensive, and the whole condition of the parts very unpromising, and yet I have put such patients on proper local and general treatment for a month, and at the end of that time you would not recognize it as the same uterus, there being very little deformity and very little evidence of there having been a laceration, and many of those cases I have seen in that way so improved that I could not in conscience advise the patient to undergo an operation.

Dr. CHASE:—I have no doubt the emphasis given by the last speaker to the fact that cases of laceration of the cervix are operated on in which no operation is required, is only too true. The status of this operation is so well fixed, I think, in the minds of intelligent gentlemen, that no discussion is necessary to elucidate that. The question of what is a good result may be looked upon somewhat differently by different gentlemen. There are several things which are desirable to be accomplished to bring the results up to the ideal standard. One is, the restoration of the parts to the normal condition to replace and cover up those everted tissues; another is, that there should be a minimum amount of scar structure left after the operation. One of the prominent reasons for the operation is the presence of scar structure, another is the presence of an extensive eroded surface, both of which are the foci of reflex irritation. Some of you were present in Albany to hear the statement made at the last meeting of the State Society by a gentleman of considerable notoriety, who intimated that there was necessarily a very considerable amount of scar structure remaining after the operation, and in a certain variety of cases he would recommend in place of repair of the cervix, amputation of it. I look upon a case in which, after the operation, there is a very considerable amount of scar structure in the line of the incision following the union, as not altogether satisfactory. I have witnessed not a few operations in which, after a period of a few weeks it would be impossible to find the line of union, and those usually are cases which are very satisfactory.

Dr. Byrne also alluded to the fact that in cases where operation is carelessly done stenosis follows. I think in cases where there is marked hyperplasia, care is needed that the os be left somewhat barrel shaped, so that when involution is complete there will be less likelihood of stenosis. I have in mind a case where the results were very satisfactory as regards the patient, with the exception that sufficient stenosis was present to require dilatation afterwards. I have used Dr. Skene's hawk-bill for several years with great satisfaction. If all the scar tissue in the angle is not removed it can be done with the scissors. More recently I have done as Dr. Byrne has done, refreshing the parts not denuded by the hawk-bill almost altogether with the scalpel, using the scissors but very little, and I think there is an advantage in it. One need not, if there is hypertrophy of the tissue, be too sparing in the amount of tissue that is removed. The bad results which have been obtained in so many cases are owing to the fact that there was not enough tissue removed. If you go through the hyperplastic exudation down to the normal tissues, you will have the proper sort of structures to unite, and that, too, with the minimum of cicatricial formation.

Dr. McNaughton:—Dr. Skene uses Emmet's scissors to complete the denudation, but his hawk-bill more especially to complete and make a nice, perfectly clean angle. His cases are remarkably nice at that point. He often takes out a large plug of tissue, and then trims with the scissors.

Dr. Jewett:—A particularly interesting feature of the paper is that it insists upon the necessity for a careful knowledge of the character of the injury before any attempt is made to restore the parts, and that the particular operation shall be chosen accordingly. It is remarkable that every now and then, some one turns up with a new operation for the perinæum, and the one operation they propose is fitted to all cases. It is certainly very clear, and goes without saying, that the only proper restoration is one that pays some respect to the anatomy of the parts; that means bringing together the torn structures in the relation they held before, and no operation is worthy of consideration that does not do that. That is why Tait's operation is not one to be commended and yet every few days some one writes up Tait's operation in the medical journals. I think it will fit only a small proportion of cases. Cases in which the result is satisfactory are cases that probably did not very much call for any operation.

With regard to the difficulties of diagnosis, to which the paper alludes—where the tear is a sub-tegumentary one, the injury may easily pass unnoticed except there be gaping of the vulva. My method of determining the fact of injury in such cases, for most of them involve the levator ani, is to depress the perinæum with the fingers and then ask the patient to "draw up." Any marked lack of power in this particular will be evidence of a damaged levator.

With regard to the results of the operation, the only satisfactory result is one which brings the posterior wall of the vagina up firmly against the anterior. The operation which does not accomplish this effectually is not a complete operation. The long scissors generally used for denuding I have always found unhandy.

Dr. Cleveland recently presented, at the New York Obstetrical Society, a set of scissors for perineal operations made much shorter than the usual instrument. They are more easily handled. As to the cervix operation, the hawk-bill scissors I have used with satisfaction. It is a quick and easy method of getting a clean angle, and there is but little paring left to be done below. The bad results in cervix operations are sometimes due to the fact that too much cervical mucous membrane is taken off, the denudation being carried too far inward, beyond the scar tissue. An opposite mistake in the cervix operation, alluded to by Emmet, is too narrow a denudation. This leaves the cervical canal with an exaggerated spindle shape, and if the os externum is small, septic secretions collect in the cervix. That difficuly is a frequent result, as Emmet believes, of bad operating on the cervix.

Dr. Skene had nothing to add to the discussion.

U. S. PHARMACOPŒIA OF 1890.

The U. S. Pharmacopœia, "1890," which will be published during 1893, adopts in great measure the *Metric System* of weights and measures; this will doubtless create much confusion in the minds of physicians and druggists, and lead to many misunderstandings and errors. In order to provide a guide to the proper dosage, etc., Dr. Geo. M. Gould, author of "The New Medical Dictionary," has prepared a very complete table of the Official and Unofficial Drugs, with doses in both the *Metric* and *English* systems; this table is to be published in P. Blakiston, Son & Co.'s Physicians' Visiting List, for 1893, together with a short description of the metric system.

RAILWAY SURGERY AT THE PAN-AMERICAN MEDICAL CONGRESS.

A section of Railway Surgery of the Pan-American Medical Congress has been organized, with Dr. C. W. P. Brock, of Richmond, Virginia, as Executive President. A full list of officers has been provided for each of the constituent countries. At the Eleventh Annual Meeting of the Wabash Railway Surgical Association—the first organization of the kind—Dr. C. B. Stemen, of Fort Wayne, was, by unanimous resolution, requested to prepare a paper on "Organized Railway Surgery," and read the same before the Section on Railway Surgery of the Pan-American Medical Congress. At the same meeting Dr. Hal C. Wyman, of Detroit, offered the following, which was unanimously adopted:

Resolved, That each member of this Association solicit his Congressman to interest himself in legislation in favor of the Pan-American Medical Congress.

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EDITORIAL.

SYMS' OPERATING BUILDING.

This magnificent structure was thrown open to the inspection of the medical profession by the Trustees of the Roosevelt Hospital, November 10, 1892. For the construction of this building and for its future maintenance, the late Wm. J. Syms left in his will $350,000. As the statement is made that $150,000 remain for the maintenance we infer that $200,000 have been expended in the construction and outfit. The plan has been carried out in a most princely way, and we doubt whether there is such another structure in the world, devoted to similar purposes. A description of its many attractions would give but a meagre idea of them, and we advise our readers to seize the first opportunity which presents for a personal inspection.

PAN-AMERICAN MEDICAL CONGRESS.

The preliminary announcement of the first Congress which is to be held in Washington, September 5, 1893, has been received, and its comprehensive character may be better understood when it is stated that the mere mention of the names of those who are officially associated with it occupies more than fifty pages. The expenses connected with such a vast organization have already been great, amounting to $5,000, which is to be paid from registration fees.

Every physician who can spare the time will doubtless attend the meeting, as it will probably be the largest gathering of medical men ever held in this country. Those who expect to become members will confer a favor on the managers by registering at once by sending their names and the fee, $10, to Dr. A. M. Owen, Evansville, Indiana.

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GOOD ROADS AND THE COUNTRY DOCTOR.

An effort is being made to establish in connection with the National Government a Road Department which shall have charge of the construction and maintenance of the roads throughout the country. In behalf of our country brethren who practice in rural districts, and of those who use "the wheel" or drive their span in the summer, we are glad to aid in any enterprise which will do away with the present system, or rather want of system, by which the farmers "work out" their road tax by so many days spent in carting on what was already a fair road, so much mud and grass roots as to make it almost impassable. The establishment of a permanent Road Exhibit at Washington, and a comprehensive exhibit of the proper methods of construction of roads at the World's Columbian Exposition are also commendable. Those who are interested in aiding this movement will find forms of petition awaiting their signature at the Society Rooms.

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LARYNGEAL STENOSIS.

The inquiry which has been set on foot by Drs. McNaughton and Maddren has undoubtedly largely determined the questions at issue between the procedure of tracheotomy, intubation and sublimation. The result of the inquiry has doubtless been to bring together more reliable statistics on the subject than have ever before been compiled. The labor of the undertaking has been great, and we are sure the profession heartily appreciates the valuable contribution which these gentlemen have made to medical literature.

PROCEEDINGS OF SOCIETIES.

AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION.

At a recent meeting of the American Electro-Therapeutic Association held in the City of New York, October 4th, 5th and 6th, the following officers were elected for the ensuing year: President, Dr. Augustin H. Goelet, of New York; vice-presidents, Dr. William F. Hutchinson, of Providence, R. I.; Dr. W. J. Herdman, of Ann Arbor, Mich.; secretary, Dr. M. A. Cleaves, of New York; treasurer, Dr. R. J. Nunn, of Savannah, Ga.; executive council, Dr. W. J. Morton, of New York, Dr. G. Betton Massey, of Philadelphia; Dr. Robert Newman, of New York; Dr. Charles R. Dickson, of Toronto, Canada; Dr. J. H. Kellogg, of Battle Creek, Mich.

The next meeting will be held September 12th, 13th and 14th, 1893.

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MEDICAL SOCIETY OF THE COUNTY OF KINGS.

A regular monthly meeting of the Medical Society of the County of Kings was held at the Society's rooms, 356 Bridge street, on Tuesday evening, October, 18th, at 8 o'clock.

The Vice-President, Dr. John C. Shaw, in the chair.

There were about seventy-five members present.

The minutes of the September meeting were read and approved.

The Secretary reported that at the last meeting of the Council there was not a quorum of the Censors, and that therefore no action was taken upon the applications for membership which were before it.

The following having been favorably reported upon by Council were declared elected to membership: Drs. Jennie C. Farrell, Francis J. Magilligan, James Wood, James A. Donohue, and Wilbur H. Seymour.

The following applications for membership were presented:

Dr. Charles A. Smith, 337 St. Mark's Avenue, L.I.C.H., 1891; proposed by Drs. R. L. Dickinson and J. H. Raymond.

Dr. Wm. E. Sullivan, 528 Henry Street, Long Island College Hospital, 1889; proposed by Drs. J. H. Raymond and Geo. McNaughton.

Dr. Edward Chase Branch, 452 Sixth Street, Univ. of Vermont, 1892; proposed by Drs. J. H. Raymond and Geo. McNaughton.

Dr. F. G. Winter, 18 Patchen Avenue, L.I.C.H., 1886; proposed by Drs. Jos. H. Hunt and Hutchinson.

Dr. A. J. Blanchard, 343A Tompkins Avenue, L.I.C.H., 1892; proposed by Drs. Seth D. Boggs and Hutchinson.

SCIENTIFIC BUSINESS.

Dr. Ezra H. Wilson presented a paper entitled "Some Considerations of the Pathology of Dyspepsia."

Discussed by Dr. Van Cott.

Dr. J. A. McCorkle presented a paper on the "Treatment of Gastro-Intestinal Catarrh."

Discussed by Drs. Wilson, Bartley, Burge, Briggs and Hunt.

Dr. E. H. Bartley presented the results of his second series of experiments on the "Artificial Production of Malaria by Inoculation of Water Filtrate."

Discussed by Dr. Arthur C. Brush.

NEW BUSINESS.

The Secretary stated that the recommendation of Council to suspend from membership Dr. Chas. N. D. Jones, which was laid on the table at the June meeting, had been made the special order of business at the present meeting.

Dr. F. H. Stuart moved that the recommendation of Council be taken from the table and considered. Seconded and carried.

Dr. J. H. H. Burge.—I do not think I have ever voted against a recommendation of the Council for anything, but it strikes me that they have recommended suspension when in this case, if voted, it would amount to expulsion. What distinction is made between expulsion and suspension I do not know, but I have always presumed that suspension was applicable to cases where time was to be given to a member to repent for his past acts, and later when the proper time came he might be restored to his membership. In the present case he would be practically expelled. It has been stated that a truly patriotic man will defend his country right or wrong, and if there is any possible mitigation for an act of brutal folly it must be found in the fact that it was instigated, in this case, by filial affection.

I should be sorry to have to vote against the action of the Council and their recommendation, and hoping to escape that, I move that this question be laid on the table.

This motion was seconded and carried, and the matter was laid upon the table.

On motion the meeting adjourned.

W. M. Hutchinson,
Secretary.

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THE BROOKLYN GYNÆCOLOGICAL SOCIETY.

The Society met at the rooms of the Medical Society of the County of Kings, May 6, 1892.

A paper was read by Dr. J. H. Raymond, entitled "Menstruation and Ovulation in the Light of Abdominal Surgery."

The following cases were reported.

NARRATION OF CASES.

Dr. George McNaughton:—A patient came to the Long Island College Hospital about two weeks ago, with a history of having had three children, the last one seven years ago. Since that time she has had two miscarriages, the last one about two-and-a-half years ago. Her menstruation was normal and the last time it occurred was on the first of March. For some reason immediately after that from her symptoms and feelings she believed herself pregnant. On the fifteenth of March she had a fainting spell and suffered much pain in her pelvis and took to her bed. Since that time she has been suffering a great deal of pain, was unable to attend to her duties, and came into the hospital for treatment. I found the uterus forward, anteflexed, and a mass behind the uterus. Without the use of the sound it seemed to be an enlarged uterus containing something, but on passing the sound we found the uterus forward, and on introducing exploring needle it was ascertained that the mass consisted of blood. The next day her temperature was 103°. She had chills and sweats, and the discharge of blood through the small aperture continued with pain as before, and it was decided to operate on her. During the night she had several fainting spells. This was last Tuesday night. On Wednesday morning her temperature was 104°, pulse 150, and increase of the induration on the right side extending up quite above the pelvic brim. It was supposed at this time that she was in bad condition for operation, and it was decided to postpone it. Since Wednesday she has gradually grown worse and the temperature has increased, but the pulse is a little better. There is however evidence of further induration on that side and it seems to be more extensive. This case is interesting in connection with the paper which I presented a short time ago, in regard to the question whether a patient ought to be operated on while she is in this condition. The diagnosis was "hæmatocele, extra-peritoneal." It is increasing and there is a possibility of its becoming intra-peritoneal if the hæmorrhage goes on much further. The mass which was found behind the uterus was mostly on the right side.

Dr. Jewett:—I did not see the case. As Dr. Palmer explained the facts it seemed to me one of extra-uterine pregnancy. I understood that there was an intra-peritoneal hæmorrhage verified by the aspirator. How often do you have that condition without rupture of an extra-uterine pregnancy?

Dr. A. J. C. Skene:—Dr. Palmer had evidence of hæmorrhage, but that and the physical signs would rather point to its being sub- or extra-peritoneal. The tumor was well defined, it rose up into the abdomen and was quite prominent on one side and had nothing of the diffused character that an intra-peritoneal collection would give rise to, so all the physical signs pointed to its being sub-peritoneal, with a possible accumulation of a little fluid blood, or more likely serum in the free peritoneal cavity, but little compared with the mass which was imprisoned, which stood up in the abdomen as prominently as my two hands.

Dr. Jewett:—I was in error as to the facts.

Dr. McNaughton:—I think it was extra-peritoneal, and that the needle did not go into the peritoneal cavity.

Dr. Skene:—The history would have been very complete of extra-uterine pregnancy with rupture, of the sub-peritoneal variety, had it not been that the hæmorrhage occurred rather earlier than we usually find it in that location, although she might have been pregnant at the time she menstruated.

The patient thought that her last menstruation was characteristic of her normal menstrual period.

The question Dr. McNaughton is desirous of having answered is, whether one would be justified in operating on a patient in that condition. I saw the patient on Tuesday and I felt very confident that her only chance would be in operation, and it was decided to operate on Tuesday, but on account of an exceedingly bad night the doctor did not have the courage to do it on Wednesday. I saw her again about noon and she had rallied somewhat and the decision was to try and bring her up a little further and then take the risk of operating. It seems to me however, if the patient and the friends were willing to take the risk, that the surgeon ought to, and since then I think there has been evidence of further hæmorrhage and the mass has become much more tense, and yet it might be due to inflammatory action which is evidently going on there. Her only salvation would be to operate if the breath could be kept in her long enough to complete the operation.

Dr. Jewett:—In connection with this operation, the propriety of intra-venous transfusion of the physiological salt solution presented itself. With a patient in that condition the injection of a quart or so of salt solution into the vessels would improve her condition and might be useful for purposes of operation. But if it were used with any other view or under any other circumstances when the internal hæmorrhage is still going on, it is a question whether it would not defeat its own object by increasing the vascular tension.

Dr. Skene:—We were all prepared for transfusion before, during, and after operation, so in case she showed signs of breaking down during the operation transfusion could be done then or immediately after and perhaps bridge her over a dangerous point. With all those preparations, would you favor operation?

Dr. Jewett:—Yes, I think, as I said at the time, if a man is hanging by a rope, it is justifiable to cut the rope.

The Society met June 3, 1892. A paper entitled, "Injuries to the Pelvic Floor" was read by Dr. A. J. C. Skene.

The following cases were narrated:

NARRATION OF CASES.

Dr. McNaughton related the further history of the case of hæmatocele reported at the last meeting. No operation was done. Her temperature became very high and her symptoms were those of speedy resolution, but suddenly during the night, she discharged a quantity of pus from the rectum and an increased quantity from the vagina, and from that time she has gone on and is getting well without operation. The tumor has disappeared; she is able to sit up and walk about her room, and the rectal opening has apparently closed because fæcal matter has ceased to pass through the vagina. There is no discharge of pus from the rectum, but there is still a discharge of pus from the vagina.

Dr. Jewett:—Was the perforation spontaneous?

Dr. McNaughton:—Yes; in the rectum, but not in the vagina. A needle had been introduced before I related the history of the case here and blood was found, and I think the opening occurred at the point of puncture.

Dr. Jewett:—There was probably no intra-peritoneal hæmorrhage?

Dr. McNaughton:—No, sir; the hæmorrhage was extra-peritoneal. According to the rules laid down it seemed to me a proper case for operation because her symptoms were those of increasing hæmorrhage and collapse. Everything seemed to indicate operation, and it was only by luck that the sac ruptured into the rectum instead of into the peritonæum, which if it had so done I think the result would have been fatal from the suppurative peritonitis which would have been set up. I think the incision ought to have been made directly over the indurated mass.

Dr. Chase:—Did I understand Dr. McNaughton to say that there was a discharge from the rectum into the vagina—that there was a recto-vaginal fistula?

Dr. McNaughton:—Yes, sir.

Dr. Chase:—Was it simultaneous with the discharge of pus into the vagina?

Dr. McNaughton:—There was some pus in the vagina, due to broken down blood, which occurred before the rupture into the rectum.

Dr. Chase:—The rupture was from the abscess into the rectum, and that communicated with the vagina?

Dr. McNaughton:—Yes, sir; fæcal matter came through into the vagina. Dr. Hyde saw the case, and thought operation was indicated.

Dr. Byrne:—I do not understand how the recto-vaginal fistula could take place. Was the accumulation of pus in the cellular tissue between the rectum and the vagina, or where was it situated before rupture took place? I do not understand the *modus operandi* by which this perforation was accomplished.

Dr. McNaughton:—I do not know how it was accomplished. There was a distinct tumor on the right side. Examination per rectum could detect that mass pressing downwards towards the rectum. Just where it took place I do not know, as it was higher up than I could reach with my finger, but that there was a recto-vaginal fistula is proved by the discharge of fæcal matter through the vagina, and that it came from this place is likely, because pus came through the rectum and that was accompanied by the disappearance of the tumor.

Oozing of blood continued after the needle was introduced for purposes of exploration, which appeared to come from the tumor rather than from the tissues.

Dr. Byrne:—I have seen quite a number of these cases where the extravasated blood has remained for a long time and finally where suppuration took place, the discharge being exceedingly offensive in character and not to be compared to any other purulent discharge from these parts that I have seen. Was there anything noticeable in the odor of this discharge?

Dr. McNaughton:—Yes, sir; it was very noticeable and it was impossible to cover it up.

Dr. Byrne:—At the onset of this attack was it characterized by the prominent symptoms usually noticeable in true bloody extravasations, that is, faintness, pallor, epigastric pain, etc.?

Dr. McNaughton:—Yes, sir.

Dr. Byrne:—That in itself is almost characteristic of the nature of such an occurrence. It is a very unusual thing to have a recto-vaginal fistula sufficiently large to permit of the escape of fæcal matter close without interference.

Dr. Hyde:—I have not seen the case since the consultation to which Dr. McNaughton refers, but at that time the tumor was pressing down well in the space between the uterus and rectum, but it seemed to me at that time, that if it should discharge at all spontaneously, it must be near to the posterior cul-de-sac, because there was a very marked pressure right in that direction and considerable softness also. I suppose that by some good fortune it broke through into the rectum as the doctor has said, so high up as not to be able to state exactly where it broke, and at about the same time that it was preparing to break in another direction, as abscesses or phlegmons often do, and many times we lance an abscess only to find in two or three days it is preparing to break again in another place. I suppose that was the way this discharged, breaking first high up into the rectum, and later at about the junction of the cul-de-sac.

When you consider such a long fistulous tract as that must have made, it is wonderful that it should close without any interference, because fæcal matter getting into a fistulous tract in that locality is very apt to cause a great deal of inflammation.

Dr. McNaughton:—It was not interfered with at all, not even douched for several days, as it was thought best to leave it alone.

Dr. Jewett:—It occurs to me to ask whether it is not possible in the disturbed relation of the parts, that the needle was the cause of the fistula, that it went through the vagina and the tumor and into the rectum, and that the through and through fistula might have been established in that manner.

Again, with regard to the method of treatment, why would it not be better in such a case, especially if operating in the presence of septic conditions, to make the incision above Poupart's ligament, peel back the peritonæum and make the operation extra-peritoneal, which would be easy. Still, at this day extra-peritoneal methods are not so important as they were some years ago.

Dr. McNaughton:—I do not believe the needle went clear through, because the tumor was quite large.

Dr. Jewett:—The rectal rupture was probably spontaneous, as Dr. Hyde suggests.

Dr. Gordon:—I will relate the histories of two cases of eclampsia that I have seen in the last six months in which veratrum viride was used quite successfully. In both cases the convulsions appeared after the birth of the child. The second case I first saw six days ago. The child was born at nine o'clock in the evening, the first convulsion was at four o'clock the next morning and the second at five o'clock. I was called between five and six o'clock, and shortly after my arrival she had the third which was most pronounced, lasting three or four minutes. The physician in attendance had used morphia hypodermatically, and chloroform, and I think chloral by the rectum. We decided to try fluid extract of veratrum viride, giving five-minim doses hypodermatically. The pulse came down from 140 to 130 in twenty minutes, when the second dose was given, and within an hour from the first dose the pulse was reduced to 57 and the convulsions ceased, and she has had no more since. The first case I saw some six months ago, and is not so vivid in my mind, but I will speak of it simply to emphasize the importance of having a reliable preparation of the drug.

The convulsions were occurring more frequently in this case, in fact the patient was in a state of coma between the convulsions. I saw her have several in the hour that I was present. Almost all the usual remedies for such a case had been tried, but I suggested the veratrum viride and left the case with the doctor that was in attendance. In an hour or two afterwards he informed me over the telephone that he had used the veratrum but the convulsions were continuing. I asked him what preparation he had used. He said he had tried to get Squibb's, but that the druggist did not have it and gave him something else. I advised him to persevere and get Squibb's fluid extract. He did so, and after using three or four five-minim doses hypodermatically, the convulsions ceased, the pulse came down, and she had no more trouble.

Dr. Jewett:—How many convulsions occurred in each of the cases?

Dr. Gordon:—In the first case there must have been from ten to twelve. I saw her have two or three inside of an hour, and she had been having them for some time before I was called. In the last case there were only three convulsions. In both cases albumen was found in the urine, and the last case still has about ten per cent. albumen.

Dr. Maddren:—Were there any casts found in the urine?

Dr. Gordon:—The last time I saw her attendant he was about to make an examination for casts, but I do not know the result of his examination.

Dr. Byrne:—I would like to ask of the obstetric authorities present whether the heroic drachm doses of veratrum viride, urged so strongly many years ago, have been abandoned in practice.

Dr. Jewett:—I think the credit of introducing veratrum viride into practice for this purpose belongs to Dr. Fearn, of this city. His dose was a drachm of the Norwood's tincture, given by the stomach.

Dr. Maddren:—I think Squibb's fluid extract is much the stronger of the two.

Dr. Jewett:—It is stronger and certainly more reliable. Yet I have used Norwood's tincture where I could not get Squibb's preparation and with satisfactory results.

Dr. Gordon:—What dose of Squibb's fluid extract would you use?

Dr. Jewett:—I never rely on the stomach dose, because the absorption is slow and the emergency is such that promptness of action is indispensable. Even if you can keep the drug in the stomach, which you cannot often do, the absorption is much too slow; so I have always preferred the hypodermic dose of from fifteen to twenty minims. The patient must be brought rapidly under the influence of the drug, for each convulsion adds to the danger. I have not hesitated to depend on veratrum in cases where the character of the pulse was such as is supposed to contraindicate it—a soft, not a hard, bounding pulse. I have also used veratrum as a prophylactic. My dose for that purpose has been five or six minims daily. In one case which I have reported the patient had two or more convulsions at about the eighth month. Immediate delivery was not permitted owing to religious scruples of the family. We therefore compromised on a prophylactic treatment of veratrum viride for five or six weeks, further convulsions occurred, and at the end of that time a dead fœtus was expelled. The case mentioned by Dr. Gordon, in which there were twenty convulsions, was a good test of veratrum viride. Patients rarely recover after so many attacks under any method of treatment.

Dr. Gordon:—I think in the first case I mentioned if the large dose of fifteen or twenty minims had been given it would have been quite a serious matter for the patient, for the ten minims which she received in the twenty minutes produced a marked prostration and depression, and we were obliged to stimulate her.

Dr. Hyde:—That brings up the point I wanted to refer to. Many years ago when this subject was first brought up—I think about the time Dr. Fearn brought it before the Kings County Medical Society—it was discussed with a good deal of animation by the different members of the society, and its dangerous toxic effect was held up as a sufficient cause for giving very small doses of it, but Dr. Fearn proved that he could, as he had done repeatedly, give drachm doses safely. If the case reported as having ten convulsions was controlled by five-minim doses hypodermically, it was in my judgment, a wonderful success; and while I do not believe in temporizing very much with these eclampsic attacks when they can be cut short by any means, it is well to bear in mind that some serious cases have been controlled by small doses. I have myself given these large doses in years gone by, not so much lately, but I do not hesitate to give half a drachm dose. I used formerly to give it by the stomach, but I do not do that now. The point is, is the toxic effect so dangerous? It has been pretty well demonstrated that you can give veratrum and continue to give it, and in increasing doses, until the respiration and the pulse are very low indeed, indicating almost immediate dissolution, and as soon as emesis takes place immediately your patient is restored. I have seen that repeatedly. You can carry it to the point of its emetic effects, and as soon as you get the patients to that point they will rally very promptly, and I believe that you rarely have any serious results after that. I think it is the vomiting that is the turning point with many of the cases that I have seen. I speak from a rather careless recollection of twenty years' practice, but I should say if veratrum was carried in the very worst cases to the point of emesis we might expect the patient to rally. However, I am glad to know if they can be controlled by smaller doses.

Dr. Gordon:—Does Dr. Hyde use Squibb's extract in thirty-minim doses hypodermatically?

Dr. McNaughton:—It seems to me we are talking about two different preparations. Five minims of Squibb's extract is, no doubt, equal to thirty minims or a teaspoonful of those preparations you find in the drug stores.

Dr. Hyde:—When it was first introduced there was an effort on the part of the druggists to get the Norwood's tincture in as nearly perfect state as it could be obtained, and physicians were obtaining it at some three or four special drug stores where it was said to be a thoroughly good article. I know there is a difference between the two preparations, but I have used twenty drops of Squibb's fluid extract without any bad effects from it.

Dr. Jewett:—There is certainly no urgent objection to giving five-minim doses provided you stand ready to repeat them. I think, however, the dangers of veratrum have been exaggerated. The patient frequently goes into collapse and presents the picture of impending death, but she comes out of it quickly with the use of an alcoholic stimulant.

There are two other drugs that should be borne in mind in the treatment of eclampsia—chloral and chloroform. The record of chloral is as good as any drug used for the purpose; a half drachm may be given in milk by the rectum, and repeated to ninety or more grains daily. Chloroform is valuable if not given too long. It permits the operator to go on safely with measures for accelerating the labor. Certainly no operative interference in eclampsia should be practiced except under the influence of chloroform.

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A regular monthly meeting of the Brooklyn Gynæcological Society was held at the society rooms, 356 Bridge Street, on Friday evening, October 7th, at 8:30 o'clock.

The President, Dr. Skene, in the chair.

There were present Drs. Byrne, F. Baldwin, Chase, Corcoran, Emery, Gordon, Hyde, Jewett, J. E. Langstaff, L. G. Langstaff, Maddren, Matheson, McEvitt, McNaughton, Skene and L. G. Baldwin.

The minutes of the June meeting were read, and after correction, approved.

PRESENTATION OF SPECIMENS.

Dr. L. G. Baldwin gave the history and presented the specimen of a case which showed manifest symptoms of extra-uterine pregnancy, and in which a very complete cast of the uterus had been passed spontaneously. Discussed by Drs. Skene, Dickinson, Byrne and Hyde.

Dr. J. W. Hyde read the paper of the evening "On the Necessity of Amputation of the Cervix Uteri in a certain class of Lacerations."

Discussed by Drs. Skene, Byrne, Chase, McEvitt, Maddren, Matheson and McNaughton.

EXECUTIVE SESSION.

Dr. McNaughton stated that there was a movement on foot in the several special societies of Brooklyn, each to appoint one of their members to coöperate with the librarian of the Kings County Society, in looking after the books and papers in the library pertaining to their respective specialties, and moved that such a committee be appointed from this society.

The president thereupon appointed Dr. L. G. Langstaff in such capacity.

ANNUAL ELECTION.

The officers for the ensuing year were balloted for with the following result:

President, Walter B. Chase, M.D.; First Vice-President, George McNaughton, M.D.; Second Vice-President, Z. T. Emery, M.D.; Recording Secretary, L. Grant Baldwin, M.D.; Corresponding Secretary, J. C. McEvitt, M.D.; Treasurer, William Maddren, M.D.; Pathologist, J. M. Van Cott, Jr., M.D.

The treasurer presented his annual report. The chair appointed Drs. Hyde and Chase an auditing committee who examined the treasurer's books and accounts and reported that they were correct and in order.

Dr. Jewett moved, in behalf of the dinner committee, that the treasurer be instructed to pay over to the committee appointed to provide a dinner for the American Gynæcological Society, the sum of $150, being this society's portion of the expense.

Seconded and carried; so ordered.

On motion the meeting adjourned.

L. Grant Baldwin, M.D.,
Secretary.

PROGRESS IN MEDICINE.

SURGERY.

BY GEORGE RYERSON FOWLER, M.D.

IMPLANTATION OF BONE.

(SENN'S METHOD.)

H. Kuemmell (Deutsche med. Wochenschrift, 1891. No. 11.)

K. used Senn's method of remedying bony defects or replacing whole bones by means of the decalcified bones of oxen, seventeen times. His cases were of three classes: he had either to fill in large bony cavities after necrotomies, etc., or to deal with pseudarthrosis and greater defects in continuity of traumatic origin, or single bones destroyed by disease were to be replaced. The preparation of the bone corresponds essentially to Senn's method. However, in cases which required the insertion of a bone clasp or staple, as in pseudarthrosis, K. did not decalcify the whole bone, but so decalcified it that a hard central portion, surrounded by a soft mass, was formed These pieces finally ossified, even in cases of suppuration and formation of fistula. Kuemmel does not decide the question as to what changes the implanted bone undergoes. The bone may become vascular and increase in growth, or it may gradually be absorbed as a foreign body. The fresh living bone, however, when planted, joins completely, as shown by Adamkiewicz (Centralblatt für Chir., 1889, pp 260 and 672).

CHOLECYSTECTOMY.

F. Cabot (Paris, G. Steinheil, 1891, 232 pages.)

Author recommends cholecystectomy. It is not much used in France, although it was described and recommended as early as 1767, by Herlin, and again in 1826 by Campaignac. The first real operation, however, was done by Langenbuch, on the 15th of July, 1882.

Péan, Michaux, Terrier and Broca, are about the only French surgeons who have performed the operation. The author has tried to induce more operations of the kind by French surgeons. He describes and criticises the different methods of operating and their results. He also gives the following as indications for cholecystectomy.

1. Spontaneous or traumatic perforation of the gall-bladder.
2. Organic tumors of the same.
3. Hydrops and empyæma.
4. Severe attacks of hepatic colic that cannot be overcome by other means.
5. Permanent biliary fistula.

Author recognises but two contra-indications: Firm and extensive adhesions of the gall-bladder to the bowel, and permanent impermeability of the ductus choledochus. In the former case cholecystotomy takes the place of cholecystectomy; in the latter cholecystenterostomy.

Author briefly describes the case already published and gives a detailed account of the cases of Terrier and Broca not yet published.

TUBERCULOSIS OF THE URETHRA.

Ahrens (Bruns. Beiträge zur klin. Chirurgie, vol. viii.) gives a concise *résumé* of former communications concerning this rare disease. We learn that tuberculosis of the male urethra, though in itself rare, is more frequent than that of the female, the latter being observed but four times. Ahrens cannot decide whether the ascending or descending form is the more common. Primary tuberculosis of the urethra is interesting in every case. Pathologico-anatomically three varieties are noted: the miliary, that with ulcerations and the diphtheroid or essentially cheesy form. A new case from Brun's clinic is characterized by the appearance of a stricture of tubercular origin.

SURGICAL TREATMENT OF AFFECTIONS OF VENOUS SINUSES OF THE DURA MATER.

Laucial (Trans. of the 10th International Medical Congress, vol. iii., p. 166). In this paper the surgical treatment of thrombosis of a sinus is discussed. The statements as to the procedure in case of thrombosis of the lateral sinus are the same as those made by A. Lane, Ch. Ballance, Fr. Sulzer and Zaufal (reported in Centralblatt für Chir., 1891, p. 350). Laucial proposes, in addition to measures already advocated in cases of thrombosis of the cavernous sinus, a new procedure. He was induced to make his proposal by two cases of such thrombosis, both of which ended fatally, one following alveolar periostitis with subsequent facial and ophthalmic phlebitis, the other developing after a small furuncle in the supra-orbital region. The latter case showed extensive suppurative thrombosis of the cavernous sinus, superior petrosal sinus, etc.; softening in the left cerebellum with suppurative phlebitis of the superficial veins of cerebellum; suppurative thrombi in the left jugular vein and coronary veins, and miliary abscesses of both lungs. For those cases that can be clearly diagnosed clinically Laucial recommends to enucleate at once the respective globe and subsequently thoroughly scrape out and disinfect the orbit, as far as possible. Even in cases where the sinus is affected already Laucial hopes to still obtain benefit by affording free drainage and by antiseptic irrigation.

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OBSTETRICS.

BY CHARLES JEWETT, M.D.,

Professor of Obstetrics and Diseases of Children, and Visiting Obstetrician, Long Island College Hospital; Physician-in-Chief to the Department of Diseases of Children, St. Mary's Hospital, Brooklyn.

PUERPERAL ECLAMPSIA.

Goldberg (Arch. f. Gyn. B. 42, H. 1.) discusses the subject of eclampsia with eighty-one cases as a text. Of the eighty-one cases. twenty, (24.7 per cent.) terminated fatally, three of the fatal cases dying from other causes, however, than eclampsia. Of the seventeen eclamptic deaths the cause was found to be either acute or chronic lesions of the kidneys in sixteen. Of eight cases reported by Lantos, post-mortem section showed chronic degeneration of the kidneys in seven, and acute in one. Schauta in twenty-eight cases found anæmia in nine, nephritis in sixteen, and normal kidneys in three. Winckel observed inflammatory lesions in one-third of his cases, entirely normal kidneys in one-third.

Examination of the brain in the author's cases revealed notable lesion in seventeen, as follows: œdema, nine, anæmia, four, hyperæmia, two. His observations differ somewhat from those of other authorities most of whom have found the cerebral more common than renal lesions. Lantos, for example, in all of eight cases, found anæmia and œdema associated in several instances with still more serious lesions. Schauta found anæmia and œdema in twenty-five out of twenty-eight cases; Winckel in five of six. Of the twenty deaths reported by the author fifteen occurred in primiparæ; five in multiparæ. The liability to eclampsia as appears in Goldberg's experience is six times greater in first than in subsequent pregnancies. The severity of the attack and the mortality in multiparæ, however, is double that in women pregnant for the first time. These results are substantially in accord with the observations of other writers.

In the author's experience the value of early delivery was demonstrated. In twenty cases delivered artificially, the convulsions ceased immediately on evacuation of the uterus. The death of the child in utero on the contrary exerted no beneficial effect on the convulsive seizures. Accouchment forcé Goldberg thinks is justifiable in desperate cases.

For prophylaxis the author relies on general tonic and hygienic measures together with due attention to the emunctories and the use of the alkaline bromides. His remedial treatment consists mainly in the use of chloroform, chloral, morphine and hot baths. The value of this treatment he observes is emphasized by the fact that the vast majority of his deaths occurred in patients who were brought into the hospital after the convulsive seizures had begun, the mortality being very small in those that were under observation from the first.

HEGAR'S SIGN OF PREGNANCY.

Ernst Sontag (Am. Obstet. Journ., Aug., 1892). The first publications with reference to compressibility of the lower uterine segment as a sign of pregnancy were those of Reinl and Compes, in the years 1884 and 1885. Yet the importance of this sign has not received full recognition. The essential point in Hegar's sign is not mere softening of the lower segment of the uterus so much as the fact that the softening is particularly great. Its location is that portion of the uterus immediately above the level of the os internum, and this characteristic of the gravid uterus must not be confounded with the softening which takes place in the body of the cervix. The latter changes are entirely distinct from Hegar's sign. The peculiar compressibility of the uterus at the isthmus is due, in part, to the fact that the uterine contents—the entire ovum—can be displaced from the lower into the upper portion. The diagnostic value of the sign is such that when well made out it amounts practically to a demonstration of pregnancy. If, however, the compressibility of the lower segment is only moderately marked, other causes must be excluded, before it can be accepted as diagnostic of pregnancy. Compressibility to the thickness of a half centimeter or less may be safely taken as unmistakable evidence of pregnancy. When developed to this degree no pathological condition simulates it.

SYMPHYSIOTOMY.

Charpentier (Nouv. Arch. d'Obstet. et de Gyn., June, 1892.) heartily endorses this operation for delivery when the pelvis is contracted to a conjugate between $2\frac{1}{2}$ and $3\frac{3}{10}$ inches. In these cases, thanks to antisepsis, it promises to supplant craniotomy on the living fœtus and may to some extent become an alternate of Cæsarean section.

GYNÆCOLOGY.

BY WALTER B. CHASE, M.D.

UTERINE HÆMORRHAGE.

Reviewing, somewhat briefly, the subject of uterine hæmorrhage, one is impressed, particularly as we take into consideration our gynæcological and consultation work, with the necessity of studying each case carefully and reaching a correct diagnosis as early as possible. When once that has been accomplished, what is to be our line of treatment?

Take the case of prolonged hæmorrhage in girlhood; the conditions are present, such as we have referred to, a flexion of some sort, a stenosis with enlargement of the body of the uterus, the endometrium is covered with a fungoid growth, small polypi are present, there may be a true condition of endometritis fungosa, perhaps there may be present a distinct polypus. Have we any better line of treatment for these conditions than a thorough, careful dilatation of the cervical canal, complete and thorough curetting, and then with care packing the cavity of the uterus with sterilized gauze, dipped or not in a solution of some mercurial, or iodoform gauze, thereby maintaining complete and thorough drainage? This is a method of treatment I have followed out for the past five years, enlarging upon it more and more as the degree of safety seems to have become greater, occasionally allowing the patient to wear afterward, for relief of the flexion, an intra-uterine stem pessary. I believe that in all cases where a simple uterine polypus has been removed a thorough curetting should be done, and packing with gauze carried out.—(Vandeveer, from President's Address, American Association of Obstetricians and Gynæcologists, Oct., 1892).

SUBINVOLUTION OF THE UTERUS—REMOTE CAUSES.

1. Uterine inertia during labor, which may depend upon weakness of the uterine muscle itself; or upon general lack of muscular tone, such as often accompanies tuberculous conditions of the system.

2. Frequently repeated deliveries exhaust the tonicity or contractility of the muscle fibre, and are thus powerful predisposing causes of subinvolution.

EXCITING CAUSES.

1. Too early rising after delivery.

2. Lacerations of the cervix are most potent and frequent causes of subinvolution.

3. Pre-existing endometritis, tumor, or neoplasms will prove potent in preventing complete involution.

4. Retained membranes or portions of placental tissue are causes, both by their mechanical action and as irritants.

5. Abortions are frequent causes, and probably for two reasons, *first*, that women are too anxious to get up soon, and do not allow the process of involution to become thoroughly established. And, *second*, because the process of involution is not as easily established in a rapidly growing uterus.

6. Puerperal sepsis is very generally followed by subinvolution.

7. Lacerations of the perinæum, by disturbing the vascular equilibrium of the perinæum and peri-vaginal tissues, act as direct causes of subinvolution.—(Boise. Annals of Gyn. and Pæd., Oct., 1892.)

NEOPLASMS OF THE VAGINA.

In the Centr. f. Gyn., 1891, No. 41, Strassmann reports two cases of tumor of the vagina, a condition comparatively rare. Neugebauer has collected thirty-five cases; Kleinwächter, fifty-three; and Breisky, in 1866, five more. Strassmann's first case occurred in a woman, forty-one years old, married, sterile, and suffering great pain, due to small tumors the size of a bean in the recto-vaginal cul-de-sac. Removal and microscopic examination of these small tumors showed them to be calcified fibromata. In the second patient, a woman, thirty-four years old, a tumor as large as a hen's egg was found in the anterior portion of the vagina, implanted upon an extensive base. This proved to be a soft fibroma, rich in blood-vessels and lymphatics.—(Medical Record.)

DOES CHLOROFORM PROMOTE POST-PARTUM HÆMORRHAGE?

In this paper the author, while pointing out the great advantage of chloroform in obstetric practice, drew attention to the fact that it is not so frequently employed by accoucheurs as might have been expected. In explanation of this two possible reasons were assigned and discussed:

1. The deterring effect produced on the profession by the alarming and disastrous results which have too often followed the use of chloroform in surgical practice.

2. Its alleged effect in promotiog post-partum hæmorrhage. In support of this view he discussed the two arguments usually put forward. These are—

a. The teaching of authorities.

b. Personal experience.

In conclusion, the author gave his own experience of an extensive and increasing employment of chloroform in obstetrics, which, he thought, warranted him in concluding that this anæsthetic has no effect in causing post-partum hæmorrhage. provided that, in all cases, care is taken not to effect delivery too rapidly, and also to manage the third stage of labor according to modern teaching. In other words, if proper care is used, post-partum hæmorrhage will not occur more frequently when chloroform is used than when the anæsthetic is not given.—(Beyers. Therapeutic Gazette, Sept., 1892.)

STERILITY.

Seeligmann states that matrimonial sterility caused by the husband may be due to the following causes:

1. Impotentia coeundi.
2. Aspermatism.
3. Azoospermia.

Of these three causes of male impotency, the comparatively rare condition of impotentia coeundi, and the almost equally rare condition of aspermatism, we may pass by and proceed to a consideration of azoospermia as the most frequent cause of sterility, or rather impotency, in the male.

Azoospermia, or a change in the ejaculatory fluid in which both quantitatively and qualitatively the semen is apparently normal, but in which the most important element, the spermatozoa are absent, can be caused by the following:

1. Stoppage of the vasa deferentia in consequence of inflammation or traumatism.

2. Nutritive disturbances of both testicles:
   a. Occurring after funiculitis, epididymitis, and duplex orchitis.
   b. From constitutional diseases: syphyilis, tuberculosis, chronic alcoholism, diabetes mellitus, etc.
   c. From varicocele, hydrocele, kryptorchismus.
3. Atrophy of the testicles:
   a. After sexual excesses.
   b. After long indulgence in onanism.
   c. After injury to certain parts of the brain, especially of the cerebellum.—(Weekly Medical Review.)

PATHOLOGY.

BY JOSHUA M. VAN COTT, JR., M.D.,

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CEREBRAL SUPPURATION FOLLOWING INFLUENZA.

Bristowe (Brit. Med. Jour., July 4th, '91). B. describes two cases of cerebral abscess which developed at the close of influenza.

In support of the ætiological connection between the influenza and the abscess are noted the facts that the initial symptoms were those of influenza, that others of the same household were suffering with influenza, and the absence of usual brain-abscess symptoms. Death occurred in both cases after a more or less strong remission in the course of the disease, perhaps two months after the beginning of the attack.

In one case autopsy revealed an abscess the size of an orange in the inferior portion of the left hemisphere, which involved the posterior frontal and adjacent portion of parietal lobes. In the other case a similar-sized abcess in the right occipital, and adjacent portion of sphenoid lobes. In case two was a small communication with the descending bone of the right ventricle.

Semiology intra vitam not noteworthy.

Three further cases, in which death resulted with cerebral symptoms, are described. No autopsies. B. thinks cerebral abcess was present in these cases, too, however, because of the great similarity of symptoms.

J. Courmont et L. Dor. De la vaccination contre la tuberculose humaine avec les produits solubles du bacille tuberculeux aviaire. (Arch. de Med. Exper. et d'Anat. Patholog., 1891. V. iii. No. 6.)

The authors sought, with the help of filtered cultures of hen-tuberculosis of various degrees of virulence to induce immunity.

The first series of experiments were begun with weak cultures, which were obtained from glycerine-agar. They experimented on rabbits and succeeded, in the majority of cases, in obtaining real immunity from new tuberculosis.

Even more interesting than this was the fact, that the animals thus protected against hen-tuberculosis were also proof against subcutaneous inoculations of human tuberculosis; and after six or seven months, being killed, were found quite sound. Further experiment showed that the filtered fluid from virulent cultures was equally operative against hen-tubercle, but at the same time possessed pretty strong toxic properties. Nineteen rabbits inoculated with this fluid, which had previously been inoculated with positively fatal doses of bacilli, showed, in part, significant modification of the course of the disease. Only seven died as the control animals with acute infection; eleven died with a chronic form; one remained entirely sound.

Intravascular inoculations were most efficient.

Still clearer were the effects of the protective inoculations, when the after-inoculations were of smaller though positively fatal doses of infectious bacilli.

It was simultaneously ascertained that the immunity persisted for forty days after the inoculation, and that the protective material was active in dead dried cultures one-and-a-half years old.

Guinea-pigs were also rendered proof against the disease by intravascular inoculations. Similar experiments with human-tuberculosis, however, failed.

Ducamp. Cerebral Cyst, Paralysis Hemianæsthesia, Hemiparesis, Oculo-motor Symptoms. (Prog. Med. 1891, No. 39.) Patient, æt 17, for three months suffered with cephalalgia, decided fever, obstipation, emesis. Later apathy, progressive paresis of extremities, *i. e.*, left upper extremity, left hemianæsthesia, exclusive of face. Distinctness of vision lessened. Moderate right ptosis, and strabismus through paralysis of musc. intern. dextr.; dilatation of r. pupil, which does not respond to light; no accommodation.

Examination of eyeground revealed on both sides "stasis-papillæ." Finally, all muscles of right eye were paralyzed except rect. ext. Death four months after onset of disease; comatose. Nercropsy: Right hemisphere larger than left, shows a tumor on outer surface of sphenoid lobes, which is in the white substance and involves the posterior half of the sphenoid and anterior half of occipital lobes.. Incision of tumor followed by emptying of it of perhaps 250 c.c. clear fluid, containing neither albumen nor sugar.

The position of the cyst occasioned pressure which accounted for all of the semiology.

Huber. A Case of Ecchinococcus Multilocularis of the Gall-bladder (Deutsch. Arch. f. kl. Med., Bd. 48. Heft. 3, 4., S. 432.)

This is the fifth reported case from H. and occurred in a 64-year old man, who had often suffered from icterus and had lost much strength. He was a gamekeeper, and as such had a great deal to do with dogs.

At the first consultation anorexia; dulness.

Fæces like clay; urine free of albumen, contained much bile matters. Liver not palpable; not enlarged. Spleen somewhat enlarged.

No transudate; no tumor in the abdomen, which was everywhere free from pain. In further course of his sickness numerous attacks of remittent fever, occasional diarrhœa with colicky pains. Death followed progressive emaciation.

Necropsy: Liver normal in size; left lobe free; right adherent firmly to diaphragm, contains a round tumor of the size of an orange, which was found to be, on examination, ecchinococcus multilocularis of the gall-bladder.

PRACTICE OF MEDICINE.

BY HENRY CONKLING, M.D.,

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STOMACH DISEASES.

Ewald, in his recently published work on diseases of the stomach, gives an interesting and important account of *lavage of the stomach.* The best plan is considered to be the siphon method. A glass funnel sufficiently large to hold two quarts is attached to one end of the rubber tube which is to be passed into the stomach. After passage of this tube the funnel, held in a depressed position, is filled with water and then raised to a proper height. The tube has numerous openings so that many streams of water enter the stomach at the same time.

The author gives two indications which are to be met in the treatment of *gastric dilatation.* The second of these concerns the stagnation of food, and the changes which may arise from food remaining in the stomach. Lavage is the treatment used. Large quantities of water are employed. All of the contents of the organ are to be withdrawn. In some cases irrigation may be practiced early in the day before any meal. If used at other times during the day it should not be done less than six hours after a meal. This treatment must be continued for some time. It gives good results. A long list of digestive disturbances pass away. A sure sign that this treatment is being effectual is the absence of constipation. Various antiseptic solutions may be used after the free use of clear water.

In *gastric catarrh* lavage is useful. Warm water may here be employed. After this an alkaline or some antiseptic solution may be poured into the stomach. The first acts on the excess of mucus; the second aids in preventing fermentative processes.

Lavage of the stomach is not a formidable operation. It is adapted for both hospital and private work. When one considers the condition of the stomach, as shown in the dead-house, where there has been chronic gastritis, associated with the prolonged use of alcohol, a cleansing process seems to be the proper treatment. The removal of excessive abnormal secretion is followed by a beneficial effect on peptic glandular structure. The water is a good tonic.

When difficulty is experienced in passing the tube, cocaine ointment as a lubricant may be used, as pointed out in an American journal a few years ago. This is not mentioned in the book. A spray of cocaine solution may be first employed.

For *nutritive enema*, a combination is suggested of eight ounces in amount. A small portion of flour is cooked with half-a-cup of a twenty-per-cent. solution of glucose. To this is added a wineglass of claret. When the mixture is cool, two or three eggs are rubbed up with water and added to it. Fifteen grains of salt are used for each egg. The enema of Leube, which was modified by Sir Morrell McKenzie, who had such a great experience in feeding by the rectum, is not recommended by the author.

The author believes that the stomach has a large *number of movements.* There are certain ganglionic cells which seem to control its motions. Many of these are situated at the pylorus. The waves of motion go in various directions. The food has no particular direction in going. It is probable that the power of the stomach in crushing or grinding the food is very slight. It is an organ that secretes. The mechanical element in its work is important. In emesis, for instance, the strongest mechanical force comes from the abdominal muscles.

There is a most interesting and well constructed article on *hunger*. The author believes this sensation to be due to impoverished blood acting on a nerve centre. This is located in the medulla. With the production of the sensation itself the stomach has but little to do. Nor is it at all essential that there be any connection in the way of nerve fibres between the stomach and the centre. With division of the nerve the sensation is still experienced. The feeling may be lessened temporarily by some impression made upon the stomach, as a light band over the abdomen, or some indigestible material taken into the organ. There has been by either of the above measures, in reality no treatment of the condition hunger, but merely an added sensation has been created, which may have some influence in directing and changing the nature of the blood current and its effect on nerve structure.

There is a condition described by the author as a *deglutition murmur*. A study of this might be of service in making a diagnosis in obscure diseases of the stomach. The murmurs are two in number. They are audible only near the cardia. The stethoscope may be placed at the ensiform cartilage. As soon as food is swallowed a high-pitched sibilant sound is heard. In about six seconds the next murmur is heard. This is multiple in number and of a gurgling or splashing character. The first sound comes from the stretching of the fibres at the cardia, the second is due to the passage of air and food into the stomach. The air is that which is swallowed with the food.

These sounds are present in healthy persons. Their absence is important. It may denote some constriction at the cardia. This means of diagnosis is simple, important, and easily applied.

OPHTHALMOLOGY.

BY RICHMOND LENNOX, M.D.,

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PATHOLOGY AND THERAPY OF LACHRYMAL APPARATUS.

Kuhnt (Bericht u. d. 21te Versamml. d. Oph. Gesell. zu Heidelberg, p. 226) in a very interesting paper based on the microscopical examination of material obtained during the past ten years gives conclusions on the pathology and treatment of the various affections of that portion of the lachrymal apparatus concerned in carrying away the tears, namely, the canaliculi, the sac and the duct. He is however not satisfied with this division, for he finds the canaliculi to really consist of two portions different both in their normal structure and in their liability to and alteration from disease. Each canaliculus consists of an outer and an inner portion, the latter extending outward from the sac from one to three millimeters. The epithelium of the outer portion (canaliculus proper) is limited by a firm elastic and but slightly vascular tunica propria, while that of the inner portion is part of a true mucosa. The epithelium rests throughout upon a thin basal membrane, and its deeper or basal layer consists of cylindrical cells differing but slightly in their general appearances throughout the canal, sac and duct. In the outer portion of the canaliculus the epithelium above the basal layer of cells consists of from nine to fourteen layers of more or less flattened cells, while in the inner portion the cells are higher, and larger cylindrical cells usually arranged in a single row upon the basal layer. Only in the inner portion of the canaliculus and in fundus of the sac are these cylindrical cells non-ciliated. Goblet cells are found throughout, least often in the canaliculi proper. The canaliculi usually empty singly into the sac. The shape of the normal sac is conical, gradually tapering into the duct, the only recesses found being at the orifices of the canaliculi (sinus Maieri). Within the bony canal one finds a kind of cavernous erectile tissue between the mucous membrane and the periosteum. Kuhnt does not admit the existence in the normal sac and duct of the many (macroscopic) valves and recesses described by other authors and considers them the results of pathological changes. One often sees however microscopical diverticula and recesses, especially in the canaliculi.

The description of the pathological changes begins naturally with those accompanying chronic catarrh. In catarrh as well as blenorrhœa the canaliculi proper remain unaffected, save for a tendency to the formation of diverticula (often filled with goblet cells) and changes in the size of the puncta. From the commencement of the inner portion of the canaliculus to the duct in the nose the mucous membrane shows an infiltration proportionate to the degree and duration of the catarrh, often sufficient to cause an almost complete closure of the lumen. This infiltration is seldom equally distributed, often affecting one wall more than the rest. In the sac one often finds follicular structures like granulations surrounded by a vascular ring. The epithelium containing numerous goblet cells adheres but lightly to the basal membrane, and slight violence suffices to remove considerable portions of it. The infiltration of the mucosa is especially marked at the following points: the opening of the canaliculi into the sac, and at the upper and lower ends of the lachrymal duct. The orifices of the canaliculi seem more easily affected because here the mucosa is thickest; because here are the terminal loops of the blood vessels, and here the canaliculi have to pierce the dense and rigid fascia of the sac. The last two causes help to explain the obstinacy of an inflammation which has once appeared at this point. The ætiological factors in the infiltration at the entrance of the sac into the duct are the narrowness of the nasal duct at this point, the firm lateral periosteal bands described by Henle and Stilling, and the fact that the erectile tissue ends here and that this would naturally be the point of greatest congestion. A continuance of the inflammatory cause of the infiltration is naturally followed by further changes, swelling and alteration in the shape of the epithelial cells, separation of the epithelium from the mucosa by collections of small cells, thus tending to still further close the lumen (and probably producing strictures), or hæmorrhages into the epithelium perhaps due to the rubbing and pressure exercised by patients themselves. All these changes could be observed in cases in which no treatment had been instituted; notably no attempts made to pass sounds.

If this chronic catarrh be not controlled we next have the changes accompanying blenorrhœa of the sac. The infiltration and swelling of the mucous membrane are still more marked and irregularities in surface appear, the blood vessels are enlarged, congested and increased in number. the cell forms in the mucosa become indistinguishable, and the epithelium separated and variously changed. In these cases the process is not limited to the sac, but extends from the inner portion of the canaliculi to the lower orifice of the lachrymal duct, and its result may be either involution or the development of new connective tissue. A constantly increasing fibrous degeneration ensues in the deep parts of the swollen mucosa. The loose tissue disappears and is replaced by fibrous bands, the mucous membrane being perhaps even entirely destroyed in places, the epithelium then resting upon firm tissue containing large gaping vessels. Even the epithelium itself is changed and may consist only of a few layers of flattened cells. These changes in the mucous membrane are however usually limited in area, the remaining portion being but little or not at all affected. The natural result of this partial atrophy is the appearance of constrictions, dilatations and irregularities in the sac which prove great hindrances in treatment, notably in the passage of sounds, false passages being only too easily established. While the swelling and infiltration may be extreme, the development of actual polypoid growths is in the author's opinion rare.

When occlusion of the sac either above or below occurs, either sooner or later distention of the same results. The changes in the mucous membrane of the sac may be really slight in spite of marked ectasia in cases in which early stenosis of the canaliculi or duct has occurred. If one opening either that of the canaliculus or that of the duct be free, in the majority of cases a distention of the sac is accompanied by the development of pseudo-polypi or granulomata, even when the characteristic doughy feeling on palpation is absent.

A scarcity of material made it but to a limited extent possible to study the special changes in the lachrymal duct, but it was enough to prove their identity in character with those already described for the inner portion of the canaliculus and for the sac. The cavernous tissue may remain for a long time unchanged, but finally atrophies. With this atrophy disappears of course the possibility of any renewed physiological function of the duct.

As to the question whether the lumen actually disappears in old dense strictures, or whether some trace of an epithelium-lined passage always exists, the author believes that in many cases it becomes absolutely impossible to locate the position of the former lumen with certainty.

The easy separation of the epithelium from the inflamed mucosa and the tendency to the development of granulomata when the swelling and infiltration become extreme, indicate the necessity in treatment of avoiding any violence to the mucous membrane lining the tear passages. Kuhnt emphasizes the importance of careful treatment of the nasal mucous membrane in these cases, it being the real source of the trouble. In the less severe forms of inflammation warm fomentations over the sac together with the use of saline nasal sprays or the introduction of cotton tampons smeared with yellow precipitate ointment into the nasal fossæ may be advised. When chronic catarrh is present the correction of nasal malpositions, the removal of the anterior portion of the hypertrophied turbinated and the use of sounds in the lower part of the lachrymal duct are recommended. Should these means not suffice to speedily diminish the epiphora, we may assure ourselves of the permeability of the tear passages by syringing with one per cent. boric acid or simple saline solution. Should repeated attempts at syringing fail, the author advises the introduction of a small sound into the sac. This proving difficult one may slit up the canaliculus. Kuhnt uses for this purpose a special modification of Weber's knife, and slits at the same time the temporal wall of the sac. Should the obstruction be not yet removed further gentle attempts may be made to introduce the sound through the duct, all violence being avoided as any laceration of the mucous membrane can only prove harmful. In the event of this not succeeding, a Stilling's knife may be used to divide the wall of the lachrymal duct in several places throughout its length. The after-treatment consists at first in cold compresses, followed after the third or fourth day by irrigation with saline or boric solution or later bichloride (1-10,000). Sounds are not used until the incisions have healed. Kuhnt favors the use of elastic or whalebone sounds in the beginning, using them not oftener than two or three times a week, the canal being irrigated once or twice daily in the interval. Gradually larger probes may be employed. He deprecates strongly the immediate wearing of styles after operation. The same treatment may be adopted in the relatively fresh cases of blenorrhœa as in those of chronic catarrh just described. When firm stricture of the inner portion of the canaliculus exists, one may divide the stricture with a pointed knife and then slit up the outer wall of the sac as already described. Should the case be of long standing and extensive atrophy of the nasal mucous membrane or even ozœna already exist, especially if the patient's surroundings be unfavorable, the author believes there is no possibility of a cure and scarcely of lasting improvement. It is then better to save the patient from the possible consequences of his incurable lachrymal disease by removal of the sac. This can best be done by total extirpation. The following are the indications for the operation: Fistula of the sac with long standing suppuration along the tear passages, chronic inflammations with marked dilatation, chronic suppurative dachryocystitis, chronic catarrhal dachryocystitis with marked stricture in the lachrymal duct or in which treatment has had little effect, or in which there is accompanying caries of the nasal duct, cases of ostitis of the nasal duct, and lastly even relatively recent cases of dachryocystitis in which a large ulcus serpens has developed in which a cataract or glaucoma operation is necessary or in which the eye has been recently injured.

OTOLOGY.

BY J. E. SHEPPARD, M.D.,

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EXPERIMENTS WITH THE TUNING-FORK FOR DETERMINING THE PERMEABILITY OF THE EUSTACHIAN TUBE.

Prof. A. Politzer (Annales des Maladies de l'Oreille, du Larynx, etc., March, 1892), in a preliminary communication gives a brief *résumé* of the conclusions arrived at from experimenting with the vibrating tuning-fork C,″ 512 vibrations to the second, held before the nostrils during, and between, the acts of swallowing. In the normal state, one hears in the two ears, under these circumstances a slight resonance equally on both sides, and this resonance is sensibly increased in both ears at the moment of deglutition, owing to the opening of the tubes, and the consequent more easy penetration of the sound-waves to the tympanic cavity. 1. In unilateral middle-ear affections with obstruction of the eustachian tube from swollen mucous membrane, mucus, etc, the fork in front of the nasal openings is more strongly perceived by the normal ear. Hence, in a case of unilateral deafness in which evidence of middle-ear trouble exists, and in which the fork before the nostrils is heard much better in the non-affected ear, obstruction of the eustachian tube on the affected side can be diagnosed. 2. In unilateral middle-ear affections in which the eustachian tube is not obstructed the vibrations of the tuning-fork, transmitted through the nasal passages, are, as a rule, heard better in the diseased ear. Hence, if, in a given case of unilateral hardness of hearing where other tests prove the trouble to be in the middle-ear, the tuning-fork is heard better through the nostrils in the affected ear, it can be accepted as evidence that the eustachian tube is not obstructed. 3. In unilateral affections where the tests and objective examination show the trouble to be labyrinthine in character, the vibrating-fork held before the nostrils is heard only in the non-affected ear, in repose as well as during deglutition.

In conclusion, Politzer says that " while there are exceptions to these rules, they in no wise diminish the value of the indicated method. Consequently, we find ourselves equipped with a new process, which, it appears, should advantageously complete those already employed (catheterization, Politzerization, etc.,) for determining the permeability of the eustachian tube.

A RARE AURAL COMPLICATION OF GONORRHŒA.

Fischel (Prager Medicin, Wochenschr., No. 11, 1891), reports the following case: About the twenty-second day of the gonorrhœal attack, the patient, æt. twenty-four, was taken with chills, and developed left-sided epididymitis. Two days later appeared a very severe headache and troublesome tinnitus. The following day he became totally deaf in both ears. M. Habermann, who examined the patient with the writer, confirmed the diagnosis. The ear trouble was due to gonorrhœal infection. Revulsive and diuretic treatment materially improved the hearing in a few days.

THE AUDITORY CENTRE.

Dr. C. K. Mills, Philadelphia, (University Medical Magazine, November, 1891), makes a very valuable clinical contribution to cerebral localization, in the report of a case of word-deafness following an apoplectic stroke, a second apoplectic attack so intensifying the original defect as to render the patient almost completely deaf, the lesions being found at the autopsy to have involved the first and second temporal convolutions of both hemispheres. He arrives at the following conclusions: 1. The centre for word-hearing is situated in the posterior thirds of the first and second temporal convolutions; its exact position is in a line with or just in front of the posterior extremity of the horizontal branch of the fissure of Sylvius. Possibly it is restricted to the second temporal convolution. 2. The third, fourth and fifth temporal convolutions take no part in cerebral audition. 3. A lesion confined to the posterior thirds of the first and second temporal convolutions of the left hemisphere will produce complete or almost complete word-deafness, the corresponding regions of the other hemisphere remaining intact. 4. The field or sphere for all auditory memories covers a much larger cortical area than that of word-hearing, including, at least, the posterior two-thirds of the first and second temporal convolutions. 5. The auditory field and special auditory centres have their highest development in the left hemisphere, but destruction of the auditory areas of the two upper temporal convolutions of both hemispheres is necessary to complete brain-deafness. 6. A lesion limited to the centre for word-hearing, and causing word-deafness, will cause also paraphasia in attempts at speaking, and paraplexia in attempts at reading. 7. An isolated lesion of the centre for word-hearing, producing absolute or nearly absolute word-deafness, does not necessarily cause inability to recall words by other means, as for instance, through their visual signs; in such cases probably the meaning of the word is understood, although the name cannot be properly verified in consciousness. 8. A cerebral lesion or lesions causing word-deafness will, in time, lead to secondary atrophy of the speech and oro-lingual centres on the motor or emissive side of the brain, and also to atrophy of the association tracts between the sensory and motor-bearing speech centres. 9. The retro-insular convolutions are anatomically and functionally closely related with subdivisions of the first temporal convolution, the most posterior of these retro-insular convolutions being continuous with the posterior half or two-thirds of the first temporal convolution.

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DISEASES OF THE SKIN.

BY SAMUEL SHERWELL, M.D.,

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(The Pathology of Eczema, by Prof. A. Neisser, Breslau.) A reprint by permission or request from the Proceedings of the German Dermatological Society, Third Congress, held in Leipzig, September, 1891, (Pick's Journal.; The Archiv. f. Dermatologie.)

If there be any more scientific and carefully considered monograph on the above subject, we are unacquainted with it. The author with great and commendable modesty in rare contrast with many German writers, appears to have considered the questions with reference to the opinions of authorities of all countries, including our own. He speaks of the difficulties of the subject at large in relation to its protean character and the varying influences that either cause or influence in degree, greater or less, its inception and course. It is a long and fairly complete paper of about forty-five pages of this Journal, and replete with carefully and practically considered observations on ascertained facts, as well as hypotheses.

He speaks first of the differences of opinion as regards the ætiology of the disease, and the great difficulty of classification of the eczematous eruptions which differ in character and appearance, while their essential characteristics are the same.

He continues by emphasizing the fact that all good authorities now recognize the catarrhal nature of the disease, (analogues to mucous membrane catarrhs), first as we believe insisted upon by Tilbury Fox and Rhindfleisch, and says that all the observations of the best microscopists, and even the later observations of Unna confirm this, in spite of some more apparent than real divergence by the latter observer.

He then asks the question and puts the pros and cons as to whether the epithelial change is the cause or result of the transudation always occurring; is himself in doubt, and quotes "Leloir's" remarks with approval, sic: "Dans *l'eczéma il existe quelque chose de speciale, précédent la processe anatomo-pathologique que nous avons decrit,* (*cause speciale*)*; dont la nature intime nous échappe,*" can this be he asks from nerve derangement; is the primary cause really a localized vaso-motor affection? He then gives a good résumé of opinions of authorities on the point without giving his own decision, but on the whole seems to lean toward that belief.

He then goes on to consider the ætiology of the affection under the following headings: 1. The primary and peculiar causes of the eczematous affection. 2. The predisposing, causes, or preparatory changes. 3. The reasons which occasion chronicity of eczemas.

Incidentally he defends Hebra and the Vienna School generally from the charge often made, that they held all other treatment except local in contempt; and we think rather overshoots his mark, in claiming that Hebra was even more inclined to treat this disease by constitutional methods than the practitioners, of other schools. After this follows a good analysis of the various reasons or causes for, or of the lesion, whether due to vaso-motor disturbance, diatheses, etc., etc. He takes many pages for this, too long a dissertation here to be quoted, or even analyzed; and then proceeds to criticise Prof. Unna's later deliverances on Eczemas in general, and Seborrhœic Eczema in particular. While incisive and at times severe, in negation of his (Unna's) position on the subject, nothing seems to be rashly considered, or objected to, but in the true scientific spirit.

He continues by referring to Jadassohon in Pick's Journal. (The Archiv. f. Dermatologie) on Pityriasis Rubra (of Hebra) who carries on his pathological enquiries in the same line with himself, and ends by a brief reference to treatment; considering: First, To what rules of local treatment must we cling? To this he answers, since we are not clear, the indications are to use antiphlogistic remedies, according to symptoms. Secondly, Shall we use only local measures? He says without doubt, the greater number of eczemas yield to local treatment alone, but later on he says we should where and when needed, use constitutional treatment occasionally; but topical treatment is always in order, and most needed.

These conclusions would seem almost lame and impotent after all, for it is the conclusion all practical dermatologists have come to long since; but the amount of work and thought, and reading, etc., it must have cost the Author, can only be gratefully considered by all interested in dermatology.

ALOPECIA AREATA.

Among other noteworthy works at the forthcoming meeting of the American Dermatological Association, September 13, 14, 15, 1892, will be the discussion of the moot questions in this interesting disease, best noticed in the following summary of points that will be discussed: 1. Are there two forms of alopecia areata; one parasitic, and one neuropathic. 2. Is there sufficient evidence to prove the contagious nature of the disease. 3. Does arsenic or any other internal remedy influence the course of the disease. 4. What is the comparative value of carbolic acid and of other topical remedies. 5. Will epilation of the margin of the patch prevent its spread. 6. What circumstances influence the prognosis of the disease.

The foregoing points have always been in dispute. It is to be hoped that the discussion may go some way toward the definite settling of same.

By most, including ourself, it is held that typical alopecia areata (or Area Celsi) is a tropho-neurosis; though some if not many authors particularly the French are inclined to believe in parasitic origin, Gruby and Bazin being the earliest leaders in this belief, the first describing the parasite he believed he had found as the Microsporon Audouini. Leloir of Lille, Besnier of Paris, and others have described apparent epidemics of this, or some similar affection pointing to its parasitic origin. Their claims have always been disputed, though difficult, as will be readily seen, to be absolutely confuted. The English and American authors for the most part are believers in the essential nervous pathogeny of the disease. Among American writers on the subject have been prominent, Drs. Bulkley and A. R. Robinson, more especially the latter, his investigations both microscopical and clinical were very extended and were published in 1888, in Vol. vii. of the Monatsheft f. pract. Derm., reference to which will furnish sufficient index to all literature on the subject up to that time. His ingenious theory of causation which he forcibly and learnedly defends, is that the trouble is caused by the invasion, of not an external vegetable parasite, but of a micrococcus in the derma itself, whose presence causes trouble in the lymphatic spaces of the region, and consequent atrophy of the hair follicles, he giving many plates showing presence of this coccus in the sites mentioned.

Lately a most interesting paper has appeared in the Archives of Pediatrics, by Dr. Chas. P. Putnam, of Boston, entitled "An Epidemic of Baldness in Spots (Alopecia Areata?) in an Asylum for Girls," August, 1892. It gives a history read at a meeting of the American Pediatric Society, May 2, 1892, and discussion as well of a series of cases occurring in this institution; they read like the history of those reported by Leloir, Bazin, etc., and of those mentioned by McCall Anderson in his book, as occurring in the practice of Dr. Hillier; still there is something of definiteness and type wanting in the cases as they are described. The papers of both Dr. Robinson and of Dr. Putnam are worthy of careful study by those interested on the subject.

DISEASES OF THROAT AND NOSE.

BY WM. F. DUDLEY, M.D.,

Attending Physician, Department Throat and Nose, Dispensary of Long Island College Hospital.

CONTRACTION OF THE TRANSVERSE ARYTENOID MUSCLE.

Albert Ruault (Journ. Lar. and Rhinol., vol. vi., No. 8). By researches upon the larynges of cadavers, it has been proved that the action of the transverse arytenoid muscle is to approximate the inner surfaces of the arytenoid cartilages to extent of contact. The vocal apophyses approach each other, do not effect actual contact and are but slightly movable. The antagonist of the arytenoideus, the posterior crico-arytenoideus, has been thoroughly demonstrated by Rühlman. This latter muscle is composed of two bundles of fibres. One, the external, is the larger, and its fibres run in a vertical direction. The other or internal bundle extends in a more horizontal direction. The external portion of this muscle draws the arytenoid cartilage outward and downward; this acts during ordinary quiet respiration, the glottis assuming a triangular shape.

The internal bunch of fibres on contraction, causes rotation of the arytenoid cartilages, the glottis appearing pentagonal in shape as is found in forced inspiration. The posterior crico-arytenoid muscle, according to Jeleuffy, also assists in act of phonation by fixing the arytenoids and maintaining the tension of the vocal bands in conjunction with the other laryngeal muscles.

If the arytenoid muscle alone be caused to contract, the posterior portion of the inter-arytenoid space will be in contact, a slight separation appearing at anterior extremity. The glottis will be fusiform in shape, the cleft extending three-quarters the length of the antero-posterior diameter of the larynx. The transverse arytenoid muscle is capable of sufficiently opposing the respiratory function of the post-crico-arytenoid muscle, to render breathing difficult but not impossible; slight exertion or fatigue results in marked dyspnœa. The voice remains unaffected.

Cases of contraction of the transverse arytenoid are not very uncommon. Examined by laryngoscope, the arytenoids appear in contact during respiration, the vocal bands slightly separated and sufficiently relaxed to rise and fall during expiration and inspiration. In phonation, nothing abnormal can be seen.

This group of symptoms has been previously noted and abscribed to complete bilateral paralysis of crico-arytenoid posterior muscles by Gerhardt. Morell Mackenzie and Semon attributed this condition to a primary abductor paralysis and a secondary abductor contraction.

Krause believed it to be a primary adductor contraction. Contraction of arytenoideus is the most consistent theory. In paralysis of post-crico-arytenoid, the voice is more affected and each phonatory effort is marked by a forward movement of the arytenoid cartilages.

If general contraction of adductors existed the vocal processes would not move anteriorly when respiration displaced the vocal bands, and be fixed by adductors only at time of phonation as they are in condition described by author.

MALFORMATIONS OF THE LOWER LIP.

Stephen Paget. (Lancet, August 27, 1892).—Malformations in this situation are so rare that the following notes are worthy of attention.

1. *Median cleft of lower lip.*—The lip was cleft through about one-third of its depth. The color of membrane in cleft was same as that of mouth. The angles of cleft did not present the same tubercles as are commonly found in clefts of upper lip.

2. *Hypertrophy of the lower lip.*—This may affect the mucous membrane or the entire lip. In the former case the patient appears to have a double lip, the fold of mucous membrane lying behind

the true lip and resembling it in shape. When the mouth is closed the inner fold disappears, but during contraction of orbicularis it is always evident. The treatment for these cases consists in removal of entire fold by free incisions; the enlarged labial glands must be included in excised tissues.

3. *Sinuses of lower lip.*—The mouths of these sinuses usually are found near free edge of lip. The openings may be very shallow or may extend downward several lines. Frequently they contain slight glairy mucus. The sinuses should be carefully dissected out or cauterized.

CHILDREN AND THEIR DISEASES.

BY FRANCIS HART STUART, A.M., M.D.

TYPHOID FEVER IN CHILDREN,

A. Moussous (Arch. Clin. de Bordeaux, No. 4, 1892) states that in a series of fifty consecutive cases of typhoid fever in children under the age of fifteen years he had only three deaths. He fully accepts the opinion that the disease is less serious in childhood than in adult life; there is less prostration, less hebetude, and seldom much diarrhœa or pneumonia. At the same time the fever presents the same characters as in the adult, and is often high—104° and even more; the pulse-rate is often also increased to 140, but this rapidity has not the serious significance which it would have in the adult, nor are the complications so often observed. The disease, however, is more severe in infants under two years of age than in children above that age. This fact is called in evidence to support the view that one of the reasons of the comparative mildness of the disease in children is the activity of their digestive secretions, which tend to inhibit the growth of the pathogenic organism. Another reason he finds in the greater functional activity of the liver and kidneys, leading to a more perfect elimination of the poisonous bodies produced during the fever. On this head Moussous presents some new observations: Bouchard and others have shown that the toxicity of the urine is increased in typhoid fever, and that this toxicity persists for a varying period after defervescence, for as much as four or five weeks, when the disease is treated by the expectant method, or still longer if antipyrin is used. With the cold bath method the toxicity of the urine is very high during the fever, but ceases quickly when defervescence has taken place (Roque and Weill); naphthol diminishes the production of the poisonous substances both during the fever and during convalescence. Moussous finds that the toxicity of the urine in children suffering from typhoid fever is sometimes increased during the pyrexial period, sometimes at its close, but that in either case it becomes normal after a few days of freedom from fever. The elimination of the poisonous substances, therefore, in children who are treated by the expectant method very nearly resembles their elimination in adults treated by baths. Moussous does not recommend resort to baths in the case of children, and notes one case in which serious syncope followed cold sponging. He advises the administration of laxatives every other day, a copious milk diet and small doses of quinine. (Abstracted in Br. Med. Journ., June 4, 1892.)

ACTION OF DIURETIN UPON CHILDREN.

Dr. Demme (Bericht aus dem Jenner'schen Kinderspital in Bern, Centrbl. f. kl. Medicine, No. 32, 1892) employed diuretin in four cases of obstinate post-scarlatinal dropsy, in three cases of dropsy due to mitral insufficiency with imperfect diuresis, in two cases of chronic peritonitis where there was copious exudate, and in two cases of exudative pleuritis. He summarizes the results as follows:

Diuretin may be given to children over one year old. It is an efficient diuretic, and is free from harmful secondary effects. Its diuretic effect seems to result from its action upon the renal epithelium. He has not yet been able to determine whether diuretin has also any marked effect upon the circulatory apparatus. At present he thinks this is impossible.

The cases of severe dropsy from scarlatinal nephritis, after the subsidence of the acute stage of the nephritis, seem to be relieved by diuretin more quickly than by any other method of treatment. In the œdema and serous accumulations resulting from disease of the mitral valve with disturbance of compensation, when digitalis has completed the process of compensation, the dropsy is rapidly relieved by the use of diuretin.

The daily dosage is as follows:—From two to five years of age, 0.5 to 1.5 g.; from six to ten years of age, 1.5 to 3.0 g. in 100 g. of water with 10 to 12 drops of brandy and 2 to 5 g. of sugar. No cumulative effects nor any diminution in the therapeutic results from continued use were noticed where the above doses were administered for several weeks.

SIR HANS SLOANE, M.D.,

The Founder of the British Museum.

This celebrated naturalist, collector and successful Physician was born at Killcleugh, in Ireland, where his father had settled as the head of a Scotch colony sent over by James I., in 1660.

He had as a youth a strong inclination to collect and study objects of natural history and other curiosities, which taste led him to take up the study of medicine, and, in order to attain a knowledge of its several branches, he went to London, where he devoted special study to botany, materia-medica and pharmacy. After four years spent in London, he traveled through France, spending some time at Paris and Montpelier, and taking his medical degree at the University of Orange. He in 1684 returned to London, and was admitted a fellow of the Royal Society and soon afterwards of the Royal College of Physicians.

It is said that on his arrival in London, Sloane waited upon Sydenham with a letter of recommendation from a friend, setting forth his qualifications in enthusiastic terms—"he was a ripe scholar, a good botanist, a skilful anatomist," etc. After the father of English medicine had read this eulogy, and had eyed the tyro very attentively, he said: "All this is mighty fine, but it won't do! Anatomy—botany—nonsense! Sir, I have an old woman in Covent Garden who understands botany better; and for anatomy, my butcher can dissect a joint as well. No, young man, this is all stuff; you must go to the bedside—it is there you can alone learn disease."

Sydenham was subsequently very kind to Sloane, and took him into his house, gave him instruction and encouragement, and recommended him in the strongest manner to practice. When Sloane announced to his benefactor his intention of accepting an opportunity to visit the island of Jamaica, Sydenham was for a long while silent, and at last said: "You must not go; you had better drown yourself in Roxmond's pond as you go along." Sloane, however, went, and though absent but fifteen months, returned home with a rich harvest, including not only subjects from the animal kingdom, but also no less than eight hundred different species of plants, a number far beyond what had ever been brought by any individual into England before. His great additions to the natural history of the West Indies, which was at that time almost virgin soil to the naturalist, together with his publications on the subject, soon made him eminent.

In 1694 Dr. Sloane was elected secretary of the Royal Society, and in that capacity revived the printing of the transactions, and continued to superintend their publication for nineteen years. In 1707 he was created M.D. at Oxford; in 1708 was elected to a vacant seat among the foreign members of the French Academy of Sciences, and in 1712 he was elected vice-president of the Royal Society, which office he continued to hold until 1727, when he succeeded the immortal Sir Isaac Newton in the presidential chair.

In the meantime he had been steadily rising in professional reputation; his great scientific attainments did not act as a bar to his professional advancement, and his practice was very extensive. He was a great favorite with Queen Anne, whom he bled in her last illness. Queen Caroline also thought highly of him, and frequently consulted him. On the accession of George I. he was appointed physician-general to the army, and in 1716 was created a baronet, being the first English physician to achieve that distinction.

It is related that when Sir Richard Blackmore inquired of him as to the best books for a medical student to read, he replied: "Read 'Don Quixote;' it is a very good book—I read it still" His loose idea of books as instructors in the practice of medicine he gave afterwards with more decorum, when he said: "The medical art could not be learned so well and so surely as by use and experience; and that he who would pay the nicest and most accurate attention to the symptoms of distempers, would succeed best in finding out the true means of cure."

He died in 1752, after a short illness of but three days, in the ninety-first year of his age, although he was an unhealthy youth, who at the age of sixteen was attacked with a "spitting of blood," whice confined him to his chamber for three years; yet by his life of sobriety and the safety-valve of his non-professional pursuits, his life was prolonged beyond the common measure of humanity, without even feeling the infirmities of old age. J. H. H.

NEW BOOKS AND BOOK NOTICES.

All books received by the JOURNAL *are deposited permanently in the Library of the Medical Society of the County of Kings.*

A MANUAL OF OBSTETRICS. By F. A. King, A.M., M.D. Fifth edition. Philadelphia, Lea Bros. & Co., 1892.

Dr. King's Manual is too well-known to require extended notice. The excellence of previous editions is fully maintained in the fifth, and much new matter has been added. It is written in a pleasing style, and the subject is clearly and systematically presented. The illustrations, several of which are new, are excellent, and the typography and general execution of the book are of the best.

The work is not wholly beyond criticism. What book is? We do not understand, for example as, the author assumes that the shape of the uterus is a part of Hegar's sign of pregnancy, nor is there any thinning of the lower uterine segment in the gravid uterus. The property of the isthmus uteri which has become known as Hegar's sign may be stated in one word, compressibility. It is conclusive evidence of pregnancy when it is extremely marked. When compression is possible by the thumb and finger to the thinness of a half centimetre. We have not been accustomed to regard the breast signs of pregnancy as "totally unreliable" even "when taken alone." On the contrary the mammary changes, in our experience, are frequently quite sufficient for the diagnosis in first pregnancies after the second month. The author attaches much more importance to pressure as an ætiological factor in pregnancy nephritis than is accorded it by most writers. Among the causes of tubal pregnancy no mention is made of the consequence of catarrhal disease, than which no other, probably, is more important, But criticism is hypercritical in a work which is in the main so good. As a whole the book can be heartily commended to student and practitioner as a safe and reliable guide.

MISCELLANEOUS.

ALVARENGA PRIZE OF THE COLLEGE OF PHYSICIANS, PHILADELPHIA.

The College of Physicians of Philadelphia announces that the next award of the Alvarenga Prize, being the income for one year of the bequest of the late Señor Alvarenga, and amounting to about One Hundred and Eighty dollars, will be made on July 14, 1893, provided that an Essay deemed by the Committee of Award to be worthy of the prize shall have been offered.

Essays intended for competition may be upon any subject in Medicine, but cannot have been published, and must be received by the Secretary of the College on or before May 1, 1893.

Each essay must be sent without signature, but must be plainly marked with a motto and be accompanied by a sealed envelope having on its outside the motto of the paper and within it the name and address of the author.

It is a condition of competition that the successful essay or a copy of it shall remain in possession of the College; other essays will be returned upon application within three months after the award.

The Alvarenga Prize for 1892 has been awarded to Dr. R. H. D. Bibb, of Saltillo, Mexico, for his essay entitled, "Observations on the Nature of Leprosy." CHARLES W. DULLES,

Secretary.

OBITUARY.

CHARLES E. DE LA VERGNE, M.D.

Dr. Charles E. De La Vergne was born July 25, 1857, in Brooklyn, N. Y. He was educated at the Polytechnic Institute, and attended medical lectures at the Long Island College Hospital, from which institution he received the degree of M.D. in 1878, standing high in his class.

He was appointed Interne to the Flatbush Hospital in 1878, and occupied the position for about two years. Subsequently he held the following positions at the Long Island College Hospital: Visiting Physician at the Dispensary; Lecturer on Materia Medica, and also Lecturer on the Practice of Medicine in the reading term.

He was appointed Assistant Surgeon to the Thirteenth Regiment, and subsequently became full surgeon.

In his private practice he made a specialty of diseases of the throat, and was often consulted by the general practictioner.

Dr. Chas. E. De La Vergne died of malignant diphtheria, June 4, 1892, having contracted the disease during his attendance upon his baby niece, whose life he tried to save. At his written request his remains were cremated at Fresh Pond, his relatives and a few intimate friends being present.

He was engaged to Miss Emma Bigelow, who died about ten years ago, only a few days before they were to be married. He was a loved and lovable man; a kind and obliging neighbor; a successful and popular physician; a fearless and confident soul in the presence of a death that came with pain and suffering.

The profession, of which he was an ornament, submit in true spirit to their loss, and extend a heartfelt sympathy to those who have lost a good physician, and a kind, noble and generous brother.

JAMES W. FLEMING,
JOSEPH H. HUNT, } Committee.
JARVIS S. WIGHT,

SUPPLEMENT

TO

THE BROOKLYN MEDICAL JOURNAL.

Medical Society of the County of Kings

PROCEEDINGS

OF THE

SEVENTY-FIRST ANNUAL MEETING

(JANUARY 19TH, 1892.)

WITH LIST OF

OFFICERS AND DELEGATES OF THE SOCIETY

FOR THE YEAR 1892.

THE

ACTIVE LIST OF MEMBERS

AND

BY LAWS (AS AMENDED.)

BROOKLYN, N. Y., FEBRUARY 1ST 1892.

OFFICERS FOR 1892.

THE COUNCIL.

PRESIDENT,

Z. TAYLOR EMERY, M.D.

VICE-PRESIDENT,

JOHN C. SHAW, M.D.

SECRETARY,

W. M. HUTCHINSON, M.D.

ASSISTANT SECRETARY,

DAVID MYERLE, M.D.

TREASURER,

CHAS. N. COX, M.D.

LIBRARIAN,

WM. BROWNING, M.D.

CENSORS,

ARNOLD STUB, M.D.
G. R. BUTLER, M.D.
JOEL W. HYDE, M.D.
GEO. E. LAW, M.D.
HERMAN BENDER, M.D.

TRUSTEES,

A. ROSS MATHESON, M.D.
WM. WALLACE, M.D.
A. J. C. SKENE, M.D.
WALTER B. CHASE, M.D.
FRANK E. WEST, M.D.

DELEGATES TO STATE MEDICAL SOCIETY,

(1892–1895.)

A. J. C. SKENE, M.D.
JNO. A. McCORKLE, M.D.
G. McNAUGHTON, M.D.
JNO. C. McEVITT, M.D.
WM. BROWNING, M.D.
H. L. BARTLETT, M.D.
H. B. DE LA TOUR, M.D.
J. L. KORTRIGHT, M.D.
G. R. BUTLER, M.D.
JOEL W. HYDE, M.D.
W. H. B. PRATT, M.D.
ERNEST PALMER, M.D.

PROCEEDINGS

OF THE

SEVENTY-FIRST ANNUAL MEETING

OF THE

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

The seventy-first annual meeting of the Medical Society of the County of Kings was held on Tuesday evening, January 19, 1892, in the Society rooms, 356 Bridge Street, at 8 o'clock.

The President, Dr. West, in the chair.

There were present about 160 members.

The Secretary read the minutes of the last meeting, which, upon motion, were received and approved.

Dr. Haydon Starrett, having been regularly proposed and passed upon by the Council, was declared elected to membership.

The Council reported favorably upon the following applications and recommended that they be elected to membership: Drs. Leon Lonria, University of Moscow, '89; Robert Stuart Royce, University of Vermont, '89; William L. Hunter, University of Buffalo, '90; Geo. S. Williams, University of New York, '90; Peter E. Kidd, College of Physicians and Surgeons, Ontario; Francis P. Peel, University of Michigan, '88; Marian Pyles, Howard University, '88; George F. Kemp, Long Island College Hospital, '91; and Philip M. Jones, Long Island College Hospital, '91.

On motion duly seconded, the report of the Council was received.

The following applications for membership were presented:

Walter C. Wood, 28 Herkimer Street, College of Physicians and Surgeons, '89; proposed by Dr. G. R. Butler, endorsed by Dr. J. H. Raymond.

J. G. Leiter, 642 Bedford Avenue; proposed by Dr. O. A. Gordan, endorsed by Dr. Walter B. Chase.

George Hubert Mallett, 104 First Place, University of Virginia, '85; proposed by Dr. J. H. Raymond, endorsed by Dr. George McNaughton.

Eugene Pierre Mallett, 104 First Place, Long Island College Hospital, '89; proposed by Dr. J. H. Raymond, endorsed by Dr. George McNaughton.

J. E. de Castro, Ph..D., M. D., Henry and President Streets, Bellevue Hospital Medical College; proposed by Dr. J. E. Clark, seconded by Dr. Henry Conkling.

Frank J. Magilligan, 135 Bergen Street, Bellevue Hospital Medical College New York, '90; proposed by Dr. William Maddren, endorsed by Dr. Victor A. Robertson.

G. A. Williams, 449 Hancock Street, University Medical College, New York, '79; proposed by Dr. Frank Baldwin, and endorsed by Lemuel G. Baldwin.

The Chair announced that he had received a request from Dr. A. W. Catlin, desiring that his name be withdrawn as a candidate for delegate to the State Society; also that he had received a communication from Dr. J. L. Kortright, asking to have his name withdrawn for censor, but wishing his name still retained as a candidate for delegate.

In accordance with the above request, the Chair withdrew the nominations of Dr. Catlin and Dr. Kortright for the positions as above stated.

The Chair: You will also notice other names with a star opposite, signifying their desire to have their names withdrawn, namely, Dr. R. L. Dickinson and Dr. George McNaughton as censor, and Dr. R. L. Dickinson as a delegate.

The Secretary tells me that he has received communications from Dr. Bliss and Dr. Lenox, wishing their names withdrawn as delegates.

The Chair will state, that owing to an oversight, as he understands—the failure on the part of the stenographer to hear the nomination—that a name has been omitted as candidate for trustee for the County Society. This mistake was not known to your chairman until the notices of the meeting had been mailed. Consequently it was a mistake which could not be rectified, and to obviate the difficulty the Chair would say that if a motion were made to defer the election of trustee until the February meeting—providing for the by-law by moving to adjourn this meeting as the annual meeting, to meet the third Tuesday in February—that such motion would be entertained.

Dr. Raymond: I make a motion to that effect, that the election of trustees be deferred until the next meeting of the Society, and that when we adjourn we adjourn to meet the third Tuesday in February.

After much discussion on the motion of Dr. Raymond, it was finally put to a vote of the house and was lost.

The Chair then declared the polls for the annual election to be open and that they would remain open until 9.30 P.M.

The report of the Secretary upon attendance of the Council was then read and accepted.

REPORT OF SECRETARY UPON ATTENDANCE AT COUNCIL MEETINGS.

Mr. President and Gentlemen:

There have been held ten regular and one special meeting of the Council during the year that has just closed.

At all of these meetings there has been more than a quorum present.

The largest attendance at any meeting has been ten; the lowest, six; the average, seven.

The President, Dr. West, has been present at every meeting.

The Vice-President, Dr. Emery, has attended eight meetings.

The Secretary, Dr. Hutchinson, has attended nine meetings.

Dr. Myerle, the Assistant Secretary, has attended five meetings.

Dr. Cox, the Treasurer, has been present at nine meetings.

The Librarian, Dr. Browning, since his election by the Council in April, has attended seven meetings.

Dr. Stub, the Senior Censor, has attended nine.

Of the remainder of the Censors, Dr. McNaughton has been present at eight, Dr. Dickinson at five, Dr. Butler at five also, and Dr. Flemming at none.

REPORT OF THE BOARD OF TRUSTEES FOR THE YEAR ENDING JANUARY 19, 1892.

The Treasurer's Report and Recommendations are as follows:

REPORT OF TREASURER ON FINANCES.

Dr.		
To balance on hand, January 20, 1891, - -	$518.03	
Received from dues and arrearages, - - -	2,015.00	
" " Directory for Nurses, - - -	750.00	
" " *Brooklyn Medical Journal*, profits for 1890, - - -	621.43	
" " Pathological Society, one-half cost of putting in new basin, -	20.00	
		$3,924.46
Cr.		
By disbursements as follows:		
East Brooklyn Savings Bank, on account of bond and mortgage - - - - - -	$1,000.00	
Brooklyn Medical Journal, subscriptions for members, - - - - - - -	858.00	
Improvements (new wash-basin) - - -	40.00	
Running expenses, - - - - - -	1,522.86	
Total, - - - -		3,420.86
Balance on hand, January 18, 1892, - - -		$503.60
On deposit in Williamsburg Savings Bank, -		53.59
Cash assets of the Society - -		$557.19

RECOMMENDATIONS.

1. That the dues for 1892 be five dollars.

2. That officers of the Society and standing committees, and so far as practicable, new members, receive a copy of the Transactions of the State Medical Society free.

3. That the price of the Transactions of the Medical Society of the State of New York be the same as they cost the Society.

4. That the dues for *corresponding members* for 1892 be three dollars, except for those who pay initiation fee of three dollars.

Respectfully submitted,

CHAS. N. COX, *Treasurer.*

BROOKLYN, N. Y., Jan. 19, 1892.

The report of the business manager of THE BROOKLYN MEDICAL JOURNAL is next submitted.

To the Trustees of the Medical Society of The County of Kings :

GENTLEMEN : The *Brooklyn Medical Journal's* Cash Report from January 1, 1891, to December 31, 1891, is as follows :

Receipts.

Advertising, Subscriptions, Merchandise, and Extra Copies	$7,554.37

Disbursements.

Printing and Electrotyping, Salaries, Postage and Delivery, Commissions, and Sundry Expenses - - -	5,895.43
Balance - - - - -	$1,658.94
Cash on hand January 1, 1891 - - - -	803.36
	$2,462.30
Profits for 1890 - - - - - -	1,864.29
Cash on hand January 1, 1892 - - -	$598.01
Amount due from Advertising - - -	736.10
" " " Merchandise - - -	232.50
Cash advanced on Contracts for 1892 - -	114.33
Cash Profits for 1891 - - - -	$1,680.94
Merchandise on hand - - - - -	489.00
Cash Profits for 1891 - - - - -	$2,169.94

List of Books, etc., contributed by the *Brooklyn Medical Journal* to the Library of the Medical Society of the County of Kings :

Year.		Number of Books.		Price.
1888		7		$23.50
1889		27		62.40
1890		31		89.15
1891		67		164.00
		132		$339.05
Price not ascertained		20	Estimated	42.20
		152		$381.25

During these years the JOURNAL has added 237 pamphlets to the Library.

The number of journals received in exchange is about 200, the subscription of which is estimated at $400.00, or $1,600.00 for the four years.

Grand total, 152 vols.	$381.25
200 journals	1,600.00
	$1,981.25

Respectfully submitted,

FRED. D. BAILEY,
Manager.

December 31, 1891.

Found correct,

WILLIAM WALLACE,
A. ROSS MATHESON,
WALTER B. CHASE,
Auditing Committee.

The Auditing Committee of this Board would beg to report as follows concerning the management of THE BROOKLYN MEDICAL JOURNAL :

At the December meeting of the Board of Trustees a Committee was appointed, consisting of Drs. Matheson, Chase, and Wallace, to examine into the business management of the JOURNAL.

Accordingly, on January 12, this Committee met at the office of Dr. Fred. D. Bailey, who took great pains to exhibit to us his method.

His Contracts were placed before us, together with the vouchers, and his system of Book-keeping was fully explained.

We were satisfied that the interests of the JOURNAL were in excellent hands, and in no way could we suggest any improvement in its business management. From what we saw we could estimate the value of the services rendered. The amount of work done is very great, and it is well done. The accounts were also examined and found correct.

Respectfully submitted,

WILLIAM WALLACE, *Chairman of Committee,*
A. ROSS MATHESON,
WALTER B. CHASE.

BROOKLYN, January 19, 1892.

Next in order is the report of the Secretary of the Directory for Nurses.

To the Board of Trustees, Medical Society of the County of Kings:

GENTLEMEN: I herewith submit the Seventh Annual Report of the "Directory" for the year 1891, showing the receipts for Registrations, Applications, etc., $1,169.21, and the running expenses, $733.43, leaving a cash balance of $435.78; this, added to the balance on hand January 1, 1891, makes a total of $1,163.23, of which amount was turned over to the Board $750.00, leaving a cash balance of $413.23, January 1, 1892.

The total number of nurses registered since the establishment of the "Directory," March 1, 1885, numbers 414, of which number there have been dropped for incompetency, failure to notify, non-payment of dues, deaths, etc., 60, leaving on our books 354 active members.

It will be seen by referring to the recapitulation by months, for 1891, the largest number of applications for nurses was in April (141) and the smallest number in August (15).

The Comparative Statement of the Business done annually since 1885 shows, that while the receipts from nurses have fallen off somewhat, yet there has been a steady increase in the number of applications.

Notwithstanding the increased opposition of Nurses' Homes and Hospitals (which would necessarily affect registrations and applications) there has been a healthy and conservative growth in the business of the "Directory."

The amount of money turned over to the Society, after deducting expenses of "Directory," is as follows:

Year 1886	$383.50		
" 1891	750.00		
		$1,133.50	
Deducting (amount appropriated by Society for inauguration of the project)		400.00	
			$733.50
On hand January 1, 1892			413.23
		(above expenses)	$1,146.73

Very respectfully,

Estelle K. Provost,
Secretary.

Directory for Nurses,
356 Bridge St., Brooklyn, N. Y.,
January 19, 1892.

Annual Report of the Directory for Nurses.

Number registered, Females	316		
" " Males	53		
	Total 414		
Number Graduates in above, Females		278	
" " Males		4	
		282	

Receipts.			*Disbursements.*	
Registrations	$260.00			
Applications	668.00		Expenses	$733.43
Annual Fees	238.00		Cash to Treasurer	750.00
Postals	3.21			
		$1,169.21		
Balance January 1, 1891		727.45	Balance January 1, 1892	413.23
		$1,896.66		$1,896.66

Assets.

Cash to Treasurer, December, 1891	$750.00	
Cash on hand, Nassau Bank	411.23	
Cash on hand, Office	2.00	
Typewriter and Desk	135.00	
Accounts outstanding year 1891	65.00	
		$1,363.23

Estelle K. Provost,
Secretary.

Year ending December 31, 1891.
Brooklyn, January 1, 1892.

The Trustees are gratified to report that the mortgage on the Society building has been reduced during the past year to $2,000.

They estimate the value of the Society's property as follows :

Value of building and lot, - - - -	$7,500
" " library and fixtures, - - -	6,000
" " *Brooklyn Medical Journal*, - -	15,000
	$28,500

Respectfully submitted,

CHAS. JEWETT, *Secretary*.

Jan. 19, 1892.

On motion it was voted that the above reports be accepted and that the recommendations of the treasurer be adopted as read.

Dr. Stuart and Dr. Raymond then addressed the meeting as follows :

Dr. STUART : At the annual meeting of 1886, after being in operation ten months, the directory turned over to the Society $383.50, only $16.50 less than the appropriation. Since that time the directory has steadily grown ; has been accumulating a fund, from which, as you learn by the report just read, $750 was recently drawn for the purpose of helping to liquidate the mortgage upon the property, and there is now in the hands of the Secretary, $413 and a fraction. This represents as the net profit to the Society, after paying all expenses in connection with the establishment and running of the directory, the sum of $1,146.73. We are to add to this what it would have cost the Society for the period of seven years for an intelligent, efficient local Librarian, that is $600 a year, or a total of $4,200. These are the material things that the directory can point to now as having done for the Society. The net profit to the Society through the directory last year was $476.00.

Mr. President and members of the Society, I do not hesitate to dwell a little upon the affairs of the directory. I would like to have you give attention to this matter, for it is of very great importance to the Society, and it seems to me that if members of the Society will receive it and take note of its importance, there will be a very great change in the condition of the directory in coming years. There have grown up in this city a large number of nurses' homes. There are also a number of training schools for nurses—four or five. These and the training schools all have telephones. It is the habit—it seems to be almost a fixed habit—of members of the profession either to allow their patients to go, or to send their patients to these homes and training schools for nurses for their patients before they come here to the directory. What can be the reason ? Members of the Society neglect the opportunity that is given to them every time they want a nurse, to benefit several very important interests, and those interests I would like to call your attention to. I will speak of the most important last.

One of the interests that would be served by this application directly to the directory—or first to the directory—for a nurse, would be this: That all the nurses in the city would be registered here; they would look here for employment; they would know that here they make their record, because, according to the regulations of the directory, every time a nurse is sent out from here a record is kept of the work she does and how she does it, and that very fact acts upon the nurse to make her feel that she is under a surveillance that improves the quality of her work. That was urged by the committee in their first presentation of the matter. Then, again, there would be no difficulty in your obtaining the nurses you wanted, provided they were disengaged. Even now, when you apply to their several homes and ask for a particular one, if she is engaged you cannot get her, and so it would be if you applied to the directory for this nurse. You can ascertain immediately whether she is disengaged or not, and if she is disengaged, you can be supplied. I would not dwell upon this point, but I mention it for you to follow out in your minds as to the effect upon the whole body of nurses in the city. Again, when you apply here, the public will have their attention called to the existence of this directory for nurses as being run in connection with the Medical Society. The fact that this bureau is under the direction of The Medical Society of the County of Kings, gives people additional confidence in it. Because it is a part of The Medical Society of the County of Kings, it has a standing it could not have otherwise. No private enterprise could have the standing that this has; but the very fact that it is a part, or a department of, and, under the direction and control of The Medical Society of the County of Kings, gives it a standing. But that standing would be immensely increased if the profession would only patronize the directory exclusively.

Now I speak of the other point, which is the most important. I read to you that the directory has been a net profit to the Society in money of $1,147.00. The directory, in other words, could have paid the whole of this mortgage of $1,000, which has just been paid off, and still have something in its treasury. That is very gratifying. But let me now read from a letter I received this morning from Professor Keen, of Philadelphia. He was very active in the inauguration of the directory in Philadelphia, and he has kept up his interest in it to the present time, so that he was able to give me these items promptly. Let me read them to you, and if every member of this Society does not feel that he has been derelict to a duty that would almost put him to shame, I shall be surprised. And, also, this letter tells us what was done in Boston, and I shall be surprised if you do not have the same feeling in regard to what you have neglected to do compared with what the city of Boston has done. He says: "You may say to the gentlemen at the annual meeting that as the directory for nurses here occupies the quarters formerly occupied by the janitor, in the building of the College of Physicians, it pays the college $240 a year as an equivalent for this. The other receipts, over and above all expenses, by the by-laws go to the library. In 1883, the year after we began, we paid $300, and the sum has steadily risen, until last year the library was a gainer by $2,400" (in one year more than twice what has been done here in seven years), "and this year will undoubtedly have $2,500 available."

Dr. Brigham, of Boston, the gentleman in charge of the one there, told me the other day "that the Medical Library Association there had benefited by a somewhat larger sum last year—I think $2,600 or $2,700" I hardly need comment upon such a statement as that. I hope that the mere reading of it before the Society, contrasting our $1,100 as a return for seven years with their return of $2,500 or $2,700 in the last single year will be sufficient.

Now, then, gentlemen, what are you going to do about it? Are you going to take up with the suggestions that have been made and make the directory the source of all your nurses, that the Society may reap the benefit it ought to reap? The directory might become one of the most frequently talked-about institutions in the city of Brooklyn, because sickness occurs constantly and everywhere, and nurses must be had. Let it be understood that the directory for nurses is the place to get nurses.

I am very sorry that in speaking to-night I reach so few members of the profession as a whole. We have 474 members as I made out from the report of membership. I do not know how many are here—100 perhaps—and I hope that in what I have said, I have made a little impression upon the minds of those I have talked to, and I hope it will not be an impression which will be like the snow that, falling to-night will melt with the next sun, but that you will bear it in mind the twelve months through, and that each one will be an advocate of the directory, presenting the facts that I have given you, to those members of the profession who are not here, so that the directory may take a *leap*—not a step—but a *leap forward*, that shall place it in the position that it ought to have, and which it will have if the members of the Society would only stand up for it.

In order that this may be done and to facilitate it being done, Mr. President, I move that a committee of three be appointed by the President, which shall take this matter into consideration, and I hope will push it with more vigor and with more success than the old committee that resigned last year did, though the committee, consisting of Dr. Hutchins, Dr. Skene, and another member of the Society, certainly did a great deal of good work. What I have now said shows that the directory has fallen far short of what it is possible for it to do for the city, for the nurses, and especially for the Medical Society.

Dr. STUART : Would it be in order to bring up the matter of the directory at this point?

The CHAIR : Certainly.

Dr. STUART : I would like to call the attention of the Society to some items in connection with the report of the directory which has just been read, and to the affairs of the directory. You will remember, or many of you will remember, that at the December or November meeting of 1884, a committee was appointed by the Society to consider the general subject of establishing here in Brooklyn a directory for nurses similar to directories that were already existing and in successful operation in Philadelphia and (the parent one) in Boston. At the annual meeting of 1885, this committee presented you a report. They estimated that for putting a directory in motion it would require in the neighborhood of $400. They were fortunate in being able to make use of the experience of the other two directories, and consequently were able to bring before you, through their courtesy, their exact statements in regard to the probable expense of inaugurating the directory and what might be expected from it. You were requested to appropriate the sum of $400. That was done. The directory was opened the first of March, 1885.

DR. RAYMOND : There is one point which I think is worthy of the attention of the Society, particularly in view of what has occurred in this city during the past three or four months. I refer to the Chapman case, in which a male nurse made improper proposals to the wife of his patient, and then shot her because she would not yield to his importunities. When we go outside of the directory for a nurse, we have oftentimes no guarantee of the character of the one whom we employ. It seems to me that this is an exceedingly important point. We know little or nothing of the character of such nurses. Here we have an organization whose duty is to investigate the character of the nurses, to see that they are competent, honest and trustworthy in every respect, and not only that, but we frequently know that there are nurses who at one time might have been abundantly competent, abundantly trustworthy, but who, in the course of years, become addicted to liquor, or in other ways become incompetent, and yet they present themselves to us with certificates of recommendation obtained at a time when they were trustworthy. I have no doubt that many nurses have been employed who at the time that their recommendations were given, were competent and trustworthy, but who have since become incompetent and untrustworthy. Now, a directory maintains a continual investigation into the character of the nurses there registered. When a nurse comes back from the patient a report is received from the attending physician, and thus the directory is then kept constantly informed. I do not see how any physician can be willing to employ a nurse unless he has abundant opportunities for investigating the character of that nurse. How many of us are there who have the time, or who take the time to make this investigation? That the directory does for us. How many of us who have the opportunity of using a directory to relieve us of this responsibility—an enormous responsibility—oftentimes involving the lives of patients, still go elsewhere for nurses. I do not understand how, when this responsibility will be assumed by a directory, physicians are willing to assume it themselves.

Another point that I would like to bring out is the tendency to go to training schools for nurses. This I think is an injury, not only to the patients who are cared for by these nurses, but it is an injury to the training-schools themselves. It is an injury to the nurses who are taken from the training school at a time when they should be receiving their instruction, and it is an injustice to the graduates who have gone through with two years of training in order to prepare themselves.

DR. STUART: I would like to add in Philadelphia and Baltimore applications made to hospitals for nurses are referred by the hospital authorities to the directories.

DR. RAYMOND: If the training schools here will do that, it will overcome the injury and injustice I have referred to, but will they do it? Perhaps the subject has already been presented to them. It seems to me we have the remedy in our own hands, and that is, not to make applications to the training schools unless we fail to obtain nurses at the directories. These nurses finally graduate, lacking a large part of the training which they would have received had they not been taken from the schools; less competent nurses are turned out from the training schools; and ultimately when physicians obtain their services they obtain the services of nurses only half trained.

The motion for the appointment of the committee of three, etc., by Dr. Raymond, was duly seconded, put to a vote and unanimously carried; the Chair announcing that he would appoint the committee later in the evening.

The Report of the Librarian was then read by Dr. Browning, as follows:

Mr. President and Gentlemen: Although my service as librarian did not cover the whole period, it is customary to summarize results for the entire year. So far as possible the work has been continued on the lines approved by my accomplished predecessor, Dr. Hunt. The increase of the library is the feature of most interest. The total number of accessions for 1891 is 670, of which about 290 were volumes, the remainder being pamphlets, reprints, etc. This brings the total of titles in the library to 4,552. The sources of this year's additions were:

Brooklyn Medical Journal	170
Paul H. Kretschmar (estate of, through Dr. W. H. Kretschmar)	141
Joseph E. Clark	62
Sidney Allen Fox (estate of)	62
Volumes of journals bound	58
S. C. Griggs	22
C. F. Barber	20
F. J. Shoop	20
William Schroeder	20
W. L. Bartlett	18
L. S. Pilcher	13
Mrs. Dr. Swift	8
S. H. Benton	7
E. S. Bunker	6
John C. Shaw	6
Jos. H. Hunt	3
Connecticutt Medical Society	3
E. H. Bartley	2
George McNaughton	2
Alex. Hutchins	1
R. M. Wyckoff	1
J. M. Winfield	1
Authors	3
Purchased	6
Miscellaneous	15

A small portion of these may have been included in last year's summary, but had not been catalogued. Besides the above several of the donators have given many valuable odd numbers and unbound volumes of journals, that cannot be more fully specified.

There are a few other matters connected with the library, to which attention is invited.

The increasing weight, for paper is heavy, should warn us that the limit this building will bear may, with the added weight of some recent addition, ere long be reached. The Librarian has felt that the more the collection would be increased the sooner must the Society proceed to secure adequate quarters.

The Librarian is making an effort to secure complete files of all the annual reports of the various hospitals, dispensaries and medical institutions of the city. These we certainly should possess, although this object is even now difficult to accomplish. Several members have given valuable aid in this direction, and it is hoped others may be willing to help.

Of the different classes of medical literature, that of the various specialties seems to have the greatest value both temporary and permanent. To assist in enlarging the home facilities for library consultation by the profession, I applied to the authorities of the Hoagland Laboratory to extend the privileges of their library to the members of this Society. This they have most courteously done, as the accompanying letter from their Secretary shows. It is a most excellent working collection on the subjects of physiology, pathology, and anatomy, and as, further, it is almost wholly foreign, it complements our own library in a wonderful degree. By an arrangement with their librarian, Dr. Kemp, a list of the Hoagland works—largely files of journals, thirty-five all told—will be kept beside our own catalogue, with direction as to consultation hours, etc. Any member desiring to avail himself of it can get a card from your librarian.

During the year the *Lancet* has been subscribed for, and I understand that our Board of Trustees propose to authorize subscriptions to a few prominent journals that we have not been able to secure in exchange. It is also proper to acknowledge the large amount of labor by the assistant Librarian, in accessioning, cataloguing, and listing during the year. Respectfully submitted,

William Browning,
Librarian.

Brooklyn, N. Y., January 11, 1892.

Dr. William Browning,
Librarian Medical Society County of Kings.

Dear Sir: Dr. C. N. Hoagland, President of the Board of Directors, directs me to say that it will afford him much pleasure to extend to the members of The Medical Society of the County of Kings the fullest opportunity to consult the library of the Hoagland Laboratory, and to that end has referred the matter to Dr. Geo. T. Kemp, Librarian, who will make such arrangements as he may think wise for both the library and the persons using it. I am, very truly,

J. H. Raymond,
Secretary.

On motion, duly seconded, the report of the Librarian was accepted, and the recommendation that a vote of thanks be extended to the Trustees of the Hoagland Laboratory was unanimously adopted.

Dr. RAYMOND: I move that the Librarian be requested to communicate with the authorities of the Polytechnic Institute with the object in view of obtaining the use of that library for the members of The Kings County Medical Society.

Motion seconded and unanimously carried.

The report of the Editorial Committee was not formal, but under this order of business Dr. Raymond said:

I would simply like to call your attention to one thing which I think stands out prominently. That is the great increase in membership of the Society during the past year. I think if you will look back over the records of the Society you will find—at least that has been my impression—in the review that I have given, that in no single year has our membership increased more than thirty-two in number. The total increase in the year 1890 was nineteen members. The report which the Secretary has presented to-night shows an increase of seventy-five. That number should be supplemented by about twenty who have not as yet qualified. As I have gone over the records, I find that the number of men whose names have been presented to the Society, and who presumably will become members of the Society when they have shown their diplomas and otherwise satisfied the Council, will be in the neighborhood of ninety-two. This great increase in number is due to two facts: To the fact that the attention of members of the profession outside of the Society has been called, first, to the library; secondly, to THE JOURNAL, and I think those two elements have been of great weight in the increase of membership in the Society.

I would also like at this time to express to those members of the Society, and others outside of the Society, who have assisted the Editorial Committee in their work, in the preparations of abstracts and in other ways, the thanks of the Editorial Committee for the assistance they have given. This work has been highly appreciated, and all that which has been done for the progress of medicine is the work of experts, and it has been an important and permanent feature of THE JOURNAL, one which has attracted considerable attention wherever THE JOURNAL goes.

The CHAIR: On behalf of the committee which was appointed some time last year, and subsequently continued, regarding the organization, or considering the subject of medical service of the Hospital of the County of Kings, the Chair would state that the committee is not prepared to-night to report, but they hope that at an early date they will be able to report to the Society something which will be of interest to you and our members.

The committee reports progress.

UNFINISHED BUSINESS.

The Secretary then read, under the last heading, the Report of the Obituary Committee on the death of Dr. Frank W. Fleischhauer, for which see Brooklyn Medical Journal, March, 1892.

NEW BUSINESS.

The following amendments to the By-Laws, proposed by Dr. Chase were then taken up, and, after some discussion, were adopted :

Amend Chap. I., Sec. 1, to read : "It shall consist of resident, non-resident, corresponding and honorary members."

Amend title of Chap. XIII., to read :—"resident, non-resident, corresponding and honorary members."

Amend Chap. XIII., Sec. 1, to read : "All members shall consist of physicians and surgeons only."

Add to Chap. XIII. a new section, viz., Sec. 9 : "Physicians residing outside the limits of the County of Kings may become corresponding members under the same rules as resident members. Such members shall not be entitled to vote or hold office, but in all other respects shall enjoy the same privileges as resident members."

Amend first line of Chap. XIV., Sec. 4, to read : "Every person thus admitted resident member shall," etc.

Add to Chap. XIV. a new section, viz., Sec. 5 : "Every person thus admitted corresponding member shall, within six months after due notification of his or her election, pay an initiation fee of three dollars or forfeit the election."

Amend Chap. XVI., Sec. 1, second line, to read : "Assessments on resident and corresponding members as shall meet its requirements."

On motion, duly seconded, the amendment by Dr. Wm. Maddren, to wit : "Amend Chap. X., Sec. 2, to read : "The five Trustees shall be elected by a majority vote of the members present," etc., was then put to a vote of the Society and also adopted.

Dr. Chase : I would suggest that the Treasurer make a recommendation as to the dues of corresponding members, and that the Society act on such suggestion.

The Treasurer : I would like to add a recommendation to my report, that the dues of corresponding members of this Society for 1892 shall be $3.

Dr. Maddren : Is that in addition to the initiation ?

The Treasurer : That is what I intended it to be.

On motion of Dr. Chase, duly seconded, the recommendation of the Treasurer was then put to a vote and unanimously adopted.

Dr. Chase : If in order, I would like to move that on admission to membership in this Society, the Secretary mail to each applicant on completing his membership in the Society a copy of the By-Laws. Carried.

Dr. Jeffrey stated that Dr. Edwin N. Colt, of No. 80 Morton Street, was about to complete his sixtieth year of active practice; that a number of physicians in his district had arranged to tender Dr. Colt a reception and a banquet on such occasion, and that he (Dr. Jeffrey) had been requested to ask The King's County Medical Society to coöperate with their committee, and would be pleased to have the Society appoint one of their members to act with such committee in arranging such reception and banquet.

On motion, duly seconded, Dr. L. S. Pilcher was appointed a committee of one to coöperate with Dr. Colt's friends in arranging for such reception and banquet.

The tellers then made the following report of the balloting for officers, etc :

REPORT OF TELLERS.

For President.—Total vote cast, 159 ; Dr. Stuart received 60 ; Dr. Emery, 98 ; imperfect, 1. Dr. Emery is elected.

For Vice-President.—Total vote, 159 ; Dr. Hunt, 73 ; Dr. Shaw, 83 ; imperfect, 4. Dr. Shaw elected.

For Secretary.—Total vote, 155 ; all for Dr. Hutchinson.

For Asst. Secretary.—Total vote, 154 ; all for Dr. Myerle.

For Treasurer.—Total, 159 ; imperfect, 3 ; Dr. Maddren, 76 ; Dr. Cox, 80. Dr. Cox elected.

For Librarian.—Total, 159 ; all for Dr. Browning.

For Censors.—Dr. Butler, 108 ; Dr. Stub, 103 ; Dr. Law, 96 ; Dr. Hyde, 84 ; Dr. Bender, 63 ; Dr. Flemming, 59 ; Dr. Bailey, 58 ; Dr. Evans, 48 ; Dr. Brush, 44 ; and Dr. Ferris, 21. Drs. Butler, Stub, Hyde, Law and Bender are elected censors.

For Trustee.—Dr. West, 48 ; Dr. Bodkin, 44 ; Dr. Fowler, 32, and Dr. Jewett, 22. No one has two-thirds vote, hence no one is elected.

For Delegates.—Dr. McCorkle, 142; Dr. Skene, 142 ; Dr. McNaughton, 120 ; Dr. McEvitt, 115 ; Dr. Bartlett, 111 ; Dr. De La Tour, 111 ; Dr. Kortright, 107 ; Dr. Butler, 103 ; Dr. Hyde, 93 ; Dr. Pratt, 91 ; Dr. Palmer, 87; Dr. Hall, 74; Dr. Winfield, 76; Dr. Brush, 60 ; and Dr. Myerle, 51. Drs. Skene, McCorkle, McNaughton, McEvitt, Browning, Bartlett, De La Tour, Kortright, Butler, Hyde, Pratt, and Palmer are selected as delegates.

Dr. Maddren : I would move that Chapter X., Sec. 3, of the By-Laws be suspended, and that Dr. West, having the highest number of votes, be declared elected as Trustee for the ensuing five years.

Motion was duly seconded and unanimously carried.

On motion of Dr. Maddren, duly seconded, the election of Dr. Cox for Treasurer was made unanimous.

The Chair announced that he would name as the Committee on Directory for Nurses, in accordance with the motion of Dr. Stuart, the following: Dr. Francis H. Stuart, Dr. Wm. Maddren, and Dr. George E. Law.

On motion the Society then adjourned.

W. M. Hutchinson,
Secretary.

ACTIVE LIST OF MEMBERS.

Arnold, John A.
K. C. Hospital, Flatbush.
Atkinson, J. G.
257 Adelphi st.
Ayres, Benj.
213 Jefferson ave.
Arrowsmith, H.
28 Schermerhorn st.
Applegate, W.
Flatbush.
Alleman, L. A. W.
64 Montague st.
Ayres, H. Messenger,
91 Lafayette ave.
Alderton, H. A.
175 Remsen st.
Amador, Martin,
99 N. Oxford st.
Armstrong, H. L.
135 Clinton st.
Anderson, S. F.
672 Degraw st.
Aldridge, Belle Voorhes,
58 Ft. Greene pl.
Barber, I. H.
36 Lafayette ave.
Bartlett, H. L.
Flatbush.
Bartley, E. H.
21 Lafayette ave.
Baylies, H. B.
442 9th st.
Barns, Geo. R.
152 Hall st.
Bailey, Fred. D.
333 Hancock st.
Baldwin, Frank.
138 Sumner ave.
Bennett, W. H.
188 6th ave.
Bell, L. T.
595 Marcy ave.
Beasley, C. D.
460 Marcy ave.
Bender, Herman,
Bushwick & Willoughby aves.
Belcher, W. N.
25 S. Portland ave.
Bellows, Chas. N.
442 Nostrand ave.
Bird, Jas. R.
122 Putnam ave.
Bliss, W. A.
218 11th st.
Blake, J. A.
194 Putnam ave.
Bliss, H. D.
23 Halsey st.
Bodkin, D. G.
259 DeKalb ave.
Bogart, J. B.
57 Putnam ave.
Boggs, Seth D.
341 Tompkins ave.
Briggs, Benj. M.
106 Willoughby st.
Bristow, A. T.
234 Clinton st.
Brush, Geo. W.
2 Spencer pl.
Brown, Anna M.
982 Bedford ave.
Brandt, Washington J.
405 Union st.
Browning, Wm.
54 Lefferts pl.

Browning, Wm. W.
155 Reid ave.
Brush, Arthur C.
177 Gates ave.
Bunker, E. S.
178 St. Johns pl.
Burge, J. H. H.
133 Montague st.
Butler, Glentworth R.
229 Gates ave.
Bucchaca, Emilie,
233 Reid ave.
Burroughs, Benj.
443 Franklin ave.
Byrne, Jno.
314 Clinton st.
Bell, Harry Kent,
113 Second pl.
Baldwin, Lemuel G.
164 Clinton st.
Bullwinkel, Henry,
433 Franklin ave.
Barney, G. D.
101 Hancock st.
Bates, W. H.
116 Schermerhorn st.
Brewster, R. C.
134 Lafayette ave.
Blake, B. F. M.
115 Lee ave.
Braislin, Wm. C.
109 Gates ave.
Boyden, F. E.
622 Marcy ave.
Baldwin, Lester C.
1153 Gates ave.
Butler, Wm. E.
Brooklyn Hospital.
Becker, Chas. P.
Hale ave., near Atlantic
Babcock, E. H.
144 Lawrence st.
Buckley, Thos. M.
37 Hicks st.
Bernaner, E. C.
253 Stockton st.
Berkele, E. F.
610 Willoughby st.
Berlenbach, P. H.
16 Suydam st.
Bostwick, Benj. E
24 Clinton st.
Brunner, C. W.
623 Wyeth ave.
Byrne, S. J.
56 7th ave.
Burnett, P. V.
274 Driggs st.
Barber, C. F.
36 Lafayette ave.
Brundage, A. H.
71 Palmetto st.
Candidus, P.
229 S. 9th st., E. D.
Catlin, Arnold W.
207 Greene ave.
Carolan, E. J.
946 Bedford ave.
Carney, Jas. L.
44 4th ave.
Carroll, A. F.
97 Park ave.
Childs, S. B.
498 Classon ave.
Church, S.
236 Clinton st.
Chase, Walter B.
645 Marcy ave.
Clark, Jos. E.
184 Clinton st.
Cochran, Alex.
127 7th ave.
Cochran, H. L.
141 Clinton st.
Cochran, J. A.
127 7th ave.
Colton, F. H.
136 Montague st.
Conkling, J. T.
143 Remsen st.
Corey, Chas.
23 S. Oxford st.
Coverly, J. H.
191 Washington Park.
Cook, C. D.
133 Pacific st.
Cox, Chas. N.
489 Greene ave.
Corcoran, W. J.
301 Clinton st.
Conkling, Henry,
143 Remsen st.
Criado, Louis F.
147 Ft. Greene pl.

Cruikshank, Wm. P.
5 Lafayette ave.
Crowell, E. P.
69 Decatur st.
Cushing, G. W.
221 Schermerhorn st.
Curry, Albert M.
493 Classon ave.
Clark, Frank H.
627 Marcy ave.
Clarke, Stanley G.
132 Reid ave.
Coffin, Laurence,
516 Bedford ave.
Carley, W. R. A.
882 Quincy st
Casey, Samuel R.
542a Hancock st.
Cornell, Jas. L.
33 Monroe pl.
Chaffee, Geo.
201 47th st.
Clominzer, Wm. H.
416 Monroe st.
Cameron, H. De Haven,
M. E. Hospital.
Coville, A. L.
154 Berkeley pl.
Day, E. A.
306 Sumner ave.
De Long, W. A.
285 S. 2d st., E. D.
De Mund, F. C.
New Utrecht.
De La Vergne, C. E.
40 Schermerhorn st.
Dickinson, R. L.
145 Clinton st.
Dority, Chas. E.
411 Union st.
Dawe, H. P.
819a Greene ave.
Dower, A J.
380 Clinton st.
Drury, G.
115 Johnson st.
Droge, J. H.
8 Stuyvesant ave.
Dusseldorf, Louis, M.
251 Hoyt st.
De La Tour, H. B
867 Union st.

Duryea, Jessie T.
160 Livingston st.
Dixon, Thos.
74 Sands st.
Dudley, Wm. F.
303 Henry st.
Dominguez, Geo.
97 Second pl.
Dunning, Z. T.
Arlington Ave. & Cleveland st.
Dirkes, E. J.
540 Madison st.
Eccles, R. G.
191 Dean st.
Edson, Benj.
83 St. Marks ave.
Eltinge, Edgar,
2 Verona pl.
Emery, Z T.
440 Washington ave.
Evans, Geo.
909 Bedford ave.
Embden, Oscar,
123 Schermerhorn st.
Farrar, J. N.
1271 Broadway, N. Y.
Fairbairn, H. A.
213 McDonough st.
Faunce, Mary A. Wattles,
239 Adelphi st.
Fearn, Herbert.
196 Clermont ave.
Fessenden, B. F.
380 Adelphi st.
Ferris, Geo. N.
Flatbush Ave., Flatbush.
Figuera, M.
12 Stuyvesant ave.
Flemming, J. W.
379 Bedford ave.
Fleming, L. M.
324 Adams st.
Fowler, G. Ryerson,
302 Washington ave.
Fowler, ———
408 10th st.
Frickenstein, T.
110 Union Ave., E D.
French, T. R.
469 Clinton ave.
Fuhs, J.
209 Hewes st.

Fuller, S. E.
77 Hanson pl.
Fuller, Frances V. C.
110 St. James pl.
Fitzsimmons, Jas. C.
455 Gold st.
Frees, Wm. A.
1138 3d ave.
Fleming. Walter S
Kings Co. Insane Asylum.
Friend Walter M.
2 First pl.
Fairchild, P. H.
155 Hancock st.
Fogarty, Thos. L.
167 Union st.
Gilfillan, Wm.
98 Remsen st.
Gilfillan, Wm. J.
79 Main st.
Gillette, F. B.
195 Colyer st., E. D.
Giroux, Thos. C.
142 S. 4th st., E. D.
Gilbert, H. S.
311 Cumberland st.
Gleavy, J. J.
295 9th st.
Gordon, O. A.
166 Tompkins ave.
Griffing, G. P.
597 Lorimer st., E. D.
Griggs, S. C.
143 Lefferts pl.
Grether, Edward,
184 Meserole st., E. D.
Gunther, C. E.
151 Clinton st.
Grover, H. L.
881 Quincy st.
Gardiner, W. F.
175 6th ave.
Griffin, J. M.
1292 Bushwick ave.
Griffith, Wm. A.
669 Willoughby ave.
Gomez, Salvador,
359 9th ave.
Hallan, A. C.
524 Bedford ave., E. D.
Halsey, J. C.
156 Reid ave.
Harrigan, J.
401 Clinton st.
Hazlett, Audley,
115 Clinton st.
Harcourt, J. M.
305 Clinton st.
Hall, Lucy M.
181 Joralemon st.
Hall, Gordon R.
26 Schermerhorn st.
Halleck, Henry T.
328 Jay st.
Hatch, E. A.
201 Hart st.
Henry, J. Williams,
222 Macon st.
Hewett, Wm. B.
80 St. Marks ave.
Hopkins, Geo. G.
350 Washington ave.
Hoagland, C. N.
410 Clinton ave.
Hoxsie, E. H.
1 Hart st.
Hoople, H. N.
35 Kingston ave.
Holton, D. C.
601 Leonard st.
Hunt, J. H.
Bedford Ave., cor. Quincy.
Hutchins, Alexander,
796 De Kalb ave.
Hutchinson, W. M
207 Clinton st.
Hudnut, Frank P.
487 Clinton ave.
Hyde, Joel W.
215 Schermerhorn st.
Hyde, Belcher,
282 McDonough st.
Henry, C. C.
56 Clark st.
Holsten, G. D.
340 Lafayette ave.
Hill, J. O. F.
Coney Island.
Hickok, E. P.
114 Pennsylvania ave.
Holt, E. S.
422 Clermont ave.
Hamilton, A. M.
726 DeKalb ave.

Hufnagel, H. M.
208 Park ave.
Hegeman, T. B.
485 Halsey st.
Ingall, J. W.
131 Lewis ave.
Irish, L. Barstow,
276 9th st.
Jenkins, J. A.
150 Milton st., E. D.
Jewett, Chas.
307 Gates ave.
Jewett, F. A.
882 Hancock st.
Jeffery, Reuben,
87 S. 9th st., E. D.
Johnson, J. G.
153 Joralemon st.
Joye, Thos. A.
166 Clinton st.
Johnson, C. H.
221 Greene ave.
Jones, C. N. D.
163 DeKalb ave.
Joerg, Oswald,
12 Schermerhorn st.
Joyce, T. U.
745 Union st.
Jones, Chas. H.
494 3d ave.
James, C. P.
413 State st.
Jenner, W. E.
429 Henry st.
Kene, J. A.
169 Willoughby st.
Kennedy, J. C.
762 Willoughby ave.
Keyes, Jas. J.
236 17th st.
King, J. S.
823 DeKalb ave.
Knight, E. H.
Washington Ave., cor
Willoughby
Kortright, J. L.
852 Rodney st.
Kretzschmar, Wm. H.
cor. Fulton & Miller Aves.,
E. N. Y.
Kuhn, Geo. R.
122 Clinton ave.

Kuhn, L. DeB,
471 Willoughby ave.
Keys, F. P.
77 Hanson pl.
Kevin, J. R.
968 Bedford ave
Kenny, E. J.
468 Vanderbilt ave.
Kuhn, J. F.
168 Jay st.
Koerner, W. F.
831 Driggs st.
Kidd, P. E.
173 Willoughby st.
Lamadrid, J. J.
412 Greene ave.
Lane, W. B.
367 Greene ave.
Law, Geo. E.
114 Pennsylvania ave.
Lewis, E. A.
102 Pierrepont st.
Lester, J. C.
406 Clinton st.
Leonard, A. S.
131 McDonough st.
Lennox, Richmond,
146 Pierrepont st.
Little, W. A.
923 Bedford ave.
Little, Frank,
114 Montague st.
Lloyd, T. M.
125 Pierrepont st.
Loewenstein, H.
223 Bushwick ave.
Lucas, D. F.
552 Pacific st.
Lawrence, A. W.
203 Bedford ave.
Low, J. Barney,
221 53d st.
Leonard, Francis I.
34 Brooklyn ave.
Livingston, Jos. A.
192 Wyona st
Maddren, Wm.
1 Hanson pl.
Mason, L. D.
171 Joralemon st.
Matheson, A. Ross,
337 Union st.

Matthewson, Arthur,
139 Montague st.
Matson, Nath.
415 Greene ave.
Matthews, H. C.
894 Quincy st.
McCorkle, J. A.
149 Clinton st.
Mattison, J. B,
185 Brooklyn ave.
Matson, W. B.
415 Greene ave.
McLean, H. C.
479 Pacific st.
McNaughton, Geo.
227 Greene ave.
McPhail, L. C.
127 Pierrepont st.
McClelland, L. A.
167 Hull st.
Mann, C. S.
480 Greene ave.
Merritt, Jno.
842 President st.
Mead, R. M.
302 Union st.
Merzbach, Joseph,
144 Wyckoff st.
Meeker, L. E.
956 Gates ave.
Miller, F. H.
39 Pennsylvania ave.
Minard, E. J. Chapin,
243 Quincy st.
Millington, W. F.
326a 9th st.
Moore, J. F.
444 Pacific st.
Moitrier, Wm.
46 Stagg st.
Mosher, Eliza M.
181 Joralemon st.
Myerle, David,
570 Bedford ave.
Morton, Henry H.
266 Clinton st.
Marquette, D. M.
176 St. Johns pl.
Marshall, J. H.
536 Monroe st.
Miller, Franklin P.
282 Stuyvesant ave.
Moser, J. M.
158 Ross st.
Meara, J. A.
4 Lafayette ave.
Mansfield, Francis,
140 Berkeley pl.
Morton, W. A.
324 Gold st.
Morrison, Robt. J.
St. Mary's Hospital.
Newman, W. A.
135 Madison st.
Nichols, Hayden,
289 Baltic st.
North, N. L., Sr.
627 Bedford ave.
North, N. L., Jr.
118 Hooper st., E. D.
Northridge, W. A.
366 Schermerhorn st.
Northridge, T. H.
320 Cumberland st.
Neuss, W.
248 Central ave.
Noss, Henry,
328 Jay st.
Nehrbas, Fred. M.
1377 Myrtle ave.
O'Connell, J. F.
159 Remsen st.
O'Grady, J.
130 Sands st.
Olcott, Cornelius,
572 Bedford Ave., E. D.
Olmstead, L. H.
404 Clinton st.
Ormiston, Robt.
117 S. Elliott pl.
Ostrander, J. W.
95 Clark st.
Ostrander, Geo. A.
61 Greene ave.
Otterson, Andrew,
97 6th ave.
Otterson, Wm. C.
144 Pierrepont st.
Owen, May R.
363 Bedford ave.
O'Sullivan, G. B.
126 William st.
Olcott, Chas. A.
572 Bedford ave.

O'Brien, Walter,
165 Baltic st.
Paine, A. R.
99 Lafayette ave.
Page, E. D.
167 Adelphi st.
Parks, Edward,
38a Kossuth pl.
Parrott, M. E.
379 Jefferson st.
Peacock, John M.
247 Madison st.
Pilcher, L. S.
145 Gates ave.
Pratt, W. H. B.
94 6th ave.
Prout, J. S.
26 Schermerhorn st.
Prendergast, P. J.
531 Henry st.
Pray, S. R.
525 Bedford ave.
Praeger, H. F.
703 Bushwick ave.
Parshall, Geo. H.
173 53d st.
Pierson, L. W.
45 Third pl.
Price, Henry R.
485 Franklin ave.
Peterman, Chas. P.
826 Lafayette ave
Pomeroy, Ralph H.
106 Berkeley pl.
Paulson, John J.
335 15th st.
Polak, J. O.
L. I. Col. Hospital.
Quinn, J. R.
449 Lafayette ave.
Randolph, W. H.
179 Herkimer st.
Rappold, J. C.
750 Flushing Ave., E. D.
Raymond, J. H.
173 Joralemon st.
Ray, John A.
45 Jefferson ave.
Rand, H. W.
147 Clinton st.
Raub, Jos. M.
295 Clinton st.
Rankin, John,
302 Sumner st.
Read, Henry N.
339 Clinton st.
Reese, Wm. W.
175 Hicks st.
Reynolds, Edwin,
140 Lafayette ave.
Rendell, John,
91 Penn st.
Reed, Henry B.
12 Verona pl.
Richardson, J. E.
125 S. Oxford st.
Risch, H. F. W.
208 17th st.
Ritter, A. H.
262 Hewes st.
Rooney, Alex. J.
226 17th st.
Rogers, H. C.
377 Gates ave.
Ross, F. H.
128 Sands st.
Roby, J. W. E.
484 Bedford ave.
Rae, Alex.
117 Henry st.
Risch, O. E. F.
208 17th st.
Robertson, Victoria,
777a Union st.
Rickard, Wilbur L.
45 Halsey st.
Rappold, J. C. Jr.,
750 Flushing ave.
Roache, Jas. A.
970 Bedford ave.
Santoire, S.
148 Clinton st.
Schenck, P. L.
60 St. Mark's ave.
Schenck, Tunis,
18th Ave., New Utrecht.
Schlatter, C. B.
158 17th st.
Schapps, J. C.
486 Bedford Ave., E. D.
Scrimgeour, R.
408 10th st.
Schlitz, F. A.
811 Willoughby ave.

Schroeder, Wm.
339 President st.
Schmetzer, G.
734 Flushing ave.
Shaw, J. C.
2 Sidney pl.
Shepard, A. W.
126 Willoughby st.
Sherwell Samuel,
33 Schermerhorn st.
Sherman, W.
336 9th st.
Shepard, C. H.
81 Columbia Heights.
Shoop, Fred. J.
80 Hanson pl.
Shaw, Frank W.
327 Greene ave.
Skene, A. J. C.
167 Clinton st.
Smith, Jos. E.
92 Lee Ave., E. D.
Spencer, Wm. E.
293 DeKalb ave.
Sparks, Agnes,
18 Hanson pl.
Spier, S. Fleet,
162 Montague st.
Sterling, J. H.
225 Schermerhorn st.
Stone, E. H.
178 Jay st.
Stuart, F. H.
123 Joralemon st.
Stub, Arnold,
84 Sixth ave.
Steinke, Carl H. C.
220 17th st.
Stratton, Wm. E.
71 7th ave.
Sullivan, J. D.
74 McDonough st.
Swalm, W. F.
118 Lafayette ave.
Sweeney, Jas.
192 N. 6th st., E. D.
Sauer, C. T.
433 10th st.
Sand, J. H. E.
703 4th ave.
Skene, Wm. H.
167 Clinton st.
Swan, Robt.
74 State st.
Schauf, Adam
198 Vernon ave.
Sloat, H. M
149 Van Buren st.
Steward, W.
188 State st.
Sheppard, Jno. E.
175 Remsen st.
Sturges, Purdy H.
440 Ninth st.
Scott, Peter,
128 Reid ave.
Schirmer, Wm. C.
366 Grant st.
Sheldon, C. W.
The Alhambra, cor. Nostrand
ave. & Halsey st.
Schelling, H. L.
841 Willoughby ave.
Smith, J. Wheeler,
1208 Herkimer st.
Smylie, Arthur E.
124 Penn st.
Sauer, J. G.
1039 3d ave.
Slee, Richard,
94 Decatur st.
Terry, C. H.
540 Washington ave.
Thayer, Wm. Henry,
171 Livingston st.
Topham, T. W.
194 Schermerhorn st.
Treadwell, G. H.
463 Gates ave.
Turner, H. C.
412½ Clinton st.
Tuthill, J. Y.
100 Ft. Greene pl.
Tucker, H. A. Jr.,
393 Clinton st.
Thwing, E. P.
156 St. Marks ave.
Turner, W. J.
105 Clinton st.
Thompson, R. P.
828 Lafayette ave.
Townsend, Palmer,
535 Greene ave.

Van Cott, J. M., Jr.,
188 Henry st.
Van Kleck, R. L.
Gravesend.
Van Ness, John,
942 Bedford ave.
Von Glahn, John,
49 Sands st.
Van Deusen, J. W.
901 Bedford ave.
Wackerhagen, G.
326 Schermerhorn st.
Wallace, Wm.
183 Congress st.
Wade, J. F.
904 Lafayette ave.
Wade, J. D.
252 S. 9th st., E. D.
Westbrook, B. F.
174 Clinton st.
West, F. E.
29 Schermerhorn st.
Welty, G. W.
500 Clinton st.
Westbrook, G. R.
175 Schermerhorn st.
Weygant, F.
745 Bedford ave.
Wells, Thos. L.
883 St. Marks ave.
White, D. Rankine,
380 9th st.
Wieber, Geo.
181 S. 5th st., E. D.
Wight, Jarvis S.
30 Schermerhorn st.
Wilbur, J. G.
544 Washington ave.
Wilde, Thos.
121 7th ave.
Williams, H. F.
363 Grand ave.
Winfield, J. M.
1255 Pacific st.
Woolley, D. Morris,
310 Sumner ave.
Wunderlich, F. W.
165 Remsen st.
Waugh, D. W.
167 Union st.
Walsh, J. E.
488a 17th st.
Wood, W. I.
485 Willoughby ave.
Warbasse, Jas. P.
M. E. Hospital,
7th Ave. & 6th st.
Wallace, Henry,
L. I. C. Hospital.
Wilson, F. E.
1242 Bushwick ave.
Weisbrod, Frederick,
9 Lewis ave.
Ward, Geo. G.
L. I. C. Hospital.
York, Thos. A.
L. I. C. Hospital.
Zabriskie, J. L.
Flatbush,
Zellhoefer, C.
175 S. 4th st., E. D.

NON-RESIDENT MEMBERS.

Allen, L. M.
Canarsie, L. I.
Allen, Stanton,
485 Milwaukee st.,
Milwaukee, Wis.
Buckmaster, A. H.
91 Madison ave, N. Y.
Burns, Arthur E.
604 I st., Tacoma, Washington
Downie, Jas.
Residence unknown
Duprey, Josephine A.,
24 Powell, st.,
San Francisco, Cal.
Duncan, C. R. S.
Residence unknown
Gorton, Eliot,
Morris Plains, N. Y.
Gray, L. C.
6 E. 49th st., N. Y.
Gray, R. C.
1157 Chapel st., New Haven, Ct.

Harlin, W. H.
Residence unknown
Hendrickson, Skidmore,
Residence unknown
Hardwick, H.
Williams, Ariz.
Hodenpyl, Eugene,
127 W. 58th st., N. Y.
Koehl, Jeremiah,
Minnesota
Leuf, A. H. P.
Philadelphia, Pa.
McCarthy, Alex. J.
Montigo Bay, Jamaica.
Macumber, John L.
St. Johnsland, L. I.
Osgood, Gilman,
Residence unknown
Perkins, Chas. E.
Residence unknown
Pomroy, H. J.
Residence unknown
Priest, F. K.
Residence unknown
Rowe, Anna Forest,
N. Y. City
Shanks, J. J.
Kings Co. Insane Asylum,
St. Johnsland.
Sneden, W. C.
Roslyn, L. I.
Thwing, Clarence,
Alaska.
Wells, Geo. W.
Richmond Hill, L. I.
White Henry D.
Residence unknown

BY-LAWS OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Amended and Adopted January 19th, 1892.

CHAPTER I.

TITLE, OFFICERS, AND MEETINGS OF THE SOCIETY.

SECTION 1. This Society shall be called "THE MEDICAL SOCIETY OF THE COUNTY OF KINGS." It shall consist of resident, non-resident, corresponding, and honorary members.

SEC. 2. The officers of the Society shall be a President, a Vice-President, a Secretary, an Assistant Secretary, a Treasurer, a Librarian, and five Censors, who shall be elected by ballot, by a majority vote, at the annual meeting, and five Trustees, to be elected in the manner hereinafter provided.

SEC. 3. Stated meetings shall be held on the third Tuesday of each month—that in January shall be the annual meeting. Of these meetings notice shall be given to each member whose name appears on the "list of active members." The meetings in July and August may be omitted by vote of the Society.

SEC. 4. Special meetings may be called by the President at his discretion, and he shall call them at the request, in writing, of five members, of which due notice shall be given as provided for in the case of stated meetings.

Sec. 5. Nomination for officers and delegates shall be made at the December meeting. The Secretary shall have the names of all nominees printed on slips of paper, two of which shall be sent to each active member with the notice of the annual meeting. If, at any election, more than one balloting for any officer be required to elect, the name of the candidate having the fewest votes shall be withdrawn after each balloting.

Sec. 6. Ten members shall form a quorum for the transaction of business; but for scientific and literary purposes a quorum shall always be presumed, unless an actual count be called for.

CHAPTER II.

ELECTION OF OFFICERS AND DELEGATES.

Section 1. At the annual election of officers and delegates the polls shall be open from 8.30 to 9.30 P.M., the Chair giving five minutes' warning before closing the polls—this section to be also printed on the ballots.

Sec. 2. The ballots shall be deposited in a box provided for the purpose, and placed conveniently in the assembly rooms of the Society.

Sec. 3. If at any election a re-ballot (as provided in chapter 1, section 5) be necessary, the polls shall be re-opened at the discretion of the Chair.

Sec. 4. In any election, should any ballot cast contain the names of more candidates for any office, set of officers, or delegates than are to be elected, that ballot shall count blank as to that especial office, set of offices or delegates.

CHAPTER III.

ORDER OF BUSINESS AND RULES OF ORDER.

Section 1. At each monthly meeting, after the presiding officer shall have called the Society to order, the following shall be the order of business:

1. Reading of the minutes.
2. Report of Council on the election of members. Chap. xv., sec. 3.
3. Application for membership. Chap. xv., sec. 1.
4. Communications, discussions, reading of papers and presentation of specimens, in the order directed by the presiding officer; at the December meeting, nominations for officers and delegates, and reading of amendments to the By-Laws. Chap. i., sec. 5; chap. xx., sec. 1.
5. Report of scientific and other committees.
6. Unfinished business.
7. New business.

SEC. 2. At the annual meeting the following shall be the order of business:

1. Reading of the minutes.
2. Report of Council on the election of members. Chap. xv., sec. 3.
3. Application for membership. Chap. xv., sec. 1.
4. Report of Secretary. Chap. vi., sec. 3, and chap. xii., sec. 5.
5. Report of Treasurer on membership. Chap. viii., sec. 5; chap. xiv., secs. 6, 7.
6. Election of officers and delegates.
7. Reading of the journal of the Council. Chap. xii., sec. 5.
8. Report of Trustees. Chap. x., sec. 6.
9. Report of Treasurer on finances. Chap. viii., sec. 4.
10. Report of the Librarian. Chap. ix.
11. Amendments to By-Laws. Chap. xx., sec. 1.
12. Reports of standing committees on membership.

SEC. 3. At special meetings the minutes of previous meetings may be read so far as they relate to the object for which the meeting was convened, and no further; and business not specified in the notice sent to members shall not be transacted.

SEC. 4. Vacancies in any of the offices or delegations of the Society may be filled by vote at any stated meeting.

SEC. 5. The following shall be the rules of order of this Society:

1. Any member who may speak on any subject or question before the Society shall rise and address the President.

2. Every member shall have the privilege of speaking twice on any question under consideration, but not oftener unless by permission of the Society.

3. Any member called to order while speaking, shall sit down, and the debate be suspended until the point of order is settled.

4. All questions of order shall be decided by the Chair, subject to an appeal, which shall be determined by vote, without debate.

5. All resolutions and amendments shall be offered in writing when required by any member.

6. No motion or resolution shall be considered unless seconded; nor question, unless stated by the President.

7. When a question is under debate no motion shall be received but to adjourn, to lay on the table, for the previous question, to postpone, to refer, or to amend; which several motions shall have precedence in the order in which they are here arranged. The first three shall be decided without debate.

8. When a blank is to be filled, the question shall be first taken on the highest number, the greatest sum, or longest time proposed.

9. Any member may call for a division of a question when the sense will admit of it.

10. The yeas and nays on any question when called for by five members present shall be taken without debate and recorded on the minutes.

11. After any question has been decided, except one of indefinite postponement, any two members who voted in the majority may, at the same or next stated meeting, move for a reconsideration thereof; without which no discussion shall be allowed.

12. All questions of order, not provided for by these rules, shall be determined by parliamentary usage.

CHAPTER IV.

PRESIDENT.

SECTION 1. It shall be the duty of the President to preside at all meetings of the Society; to call the meetings to order at the appointed time, and to preserve order and decorum. He may dissolve any meeting that may become disorderly.

SEC. 2. He shall perform the duties prescribed by the Statute, By-Laws and Resolutions of the Society.

SEC. 3. He may deliver an inaugural address at the meeting in April.

SEC. 4. He shall appoint all committees not otherwise ordered by special resolution.

SEC. 5. He shall take the sense of the Society on every motion made and seconded, and declare the result.

SEC. 6. He, or any member who may preside, shall have no vote, except on questions where there is an equal division of voices, and except at elections.

SEC. 7. He shall confer a diploma of license on such persons as are certified by the Censors to be qualified for the practice of physic and surgery, on receiving for such diploma the sum of five dollars for the use of the Society.

SEC. 8. He shall pay to the Treasurer all moneys he may receive for the use of the Society.

SEC. 9. He shall keep on file all documents and certificates in relation to the Society, which are by law deposited with him ; and these shall be delivered to his successor.

SEC. 10. It shall be his duty to procure papers, communications, etc., on scientific subjects, for presentation and discussion at the stated meetings of the Society.

CHAPTER V.

VICE-PRESIDENT.

The Vice-President, in the absence of the President, shall preside, and perform the duties of President.

CHAPTER VI.

SECRETARY.

SECTION 1. The Secretary shall perform the duties directed by the Statutes, the By-Laws and Resolutions of the Society.

SEC. 2. He shall keep in his book a full and distinct record of all the transactions of the Society, and a chronological list of all the members.

SEC. 3. He shall inform all persons admitted to membership of their election, and notify them to call upon him, pay the initiation fee, and sign the By-Laws; and he shall report at the annual meeting the names of all the members elect who have neglected or refused to do so in accordance with the regulations of the Society.

SEC. 4. He shall permit no member-elect to sign the By-Laws of the Society until the initiation fee be paid.

SEC. 5. He shall issue to any new member desiring it, a certificate of membership, signed by the President; but this certificate shall not be duplicated without the consent of the Council.

SEC. 6. He shall conduct the correspondence of the Society. He shall retain copies of all letters written by him in behalf of the Society, and preserve on file all letters and communications received by him in his official capacity, and report the same at each stated meeting.

CHAPTER VII.

ASSISTANT SECRETARY.

The Assistant Secretary shall issue notices of all meetings of the Society, assist the Secretary in the discharge of his duties, and in his absence perform them.

CHAPTER VIII.

TREASURER.

SECTION 1. The Treasurer shall perform the duties directed by the Statutes, the By-Laws and Resolutions of the Society.

SEC. 2. It shall be the duty of the Treasurer to present a bill of the annual dues to each member every year, showing all arrearages, and to demand payment of the same, at least twice while unpaid, during the year in which such bill may have been rendered. For this purpose, the

Treasurer is authorized to have the necessary blank printed, and to employ a competent collector.

Sec. 3. On the written approval of the Chairman of the Board of Trustees, he shall pay all bills of the Society as they become due.

Sec. 4. He may, with the consent of the Council, compromise the indebtedness of members in arrears to the Society.

Sec. 5. He shall render an account, at every annual meeting, of all the moneys received and expended by him, and of all balances remaining in his hands, and state what assessment will be necessary to cover the expenses of the ensuing year.

Sec. 6. He shall report to the Society, at the annual meeting, the names of those on the "List of Active Members," and of those in arrears with the Treasurer, and of those suspended for unpaid dues.

CHAPTER IX.

LIBRARIAN.

The Librarian shall have charge of all books, pamphlets, manuscripts, anatomical or pathological specimens, apparatus, instruments, medals, coins, or scientific property of whatever kind, and affix to each donation the name of the donor; keep a catalogue; observe such rules as shall be prescribed by the Council for the regulation of his department, and render a full account thereof, at least once a year, and oftener if required.

CHAPTER X.

CENSORS.

Section 1. The Censors shall perform the duties prescribed by the Statutes the By-Laws and Resolutions of the Society.

Sec. 2. In the absence of the President and Vice-President, the senior Censor shall preside.

Sec. 3. The seniority of the Censors shall be determined by the Censors themselves, immediately after their election, and notice thereof shall be given to the President and Secretary.

Sec. 4. The Censors shall examine the credentials and investigate the professional and personal character of each candidate for admission to membership, and shall report thereon to the Council as soon as practicable.

Sec. 5. They shall examine all applicants for license to practice physic and surgery who have complied with the requisitions of the Statutes of the State, and the By-Laws of the Society; and shall give to those qualified a certificate to that effect, addressed to the President.

Sec. 6. Three Censors shall constitute a quorum for ordinary business.

CHAPTER XI.

TRUSTEES.

SECTION 1. The Board of Trustees shall consist of seven members, viz.: The President and Treasurer, *ex-officio*, and five members of the Society.

SEC. 2. The five Trustees shall be elected by a majority vote of the members present, to serve as they shall elect, as follows:

One for five years.
One for four years.
One for three years.
One for two years.
One for one year.

And hereafter at each annual meeting a Trustee shall be elected to serve for five years.

SEC. 3. In the event of the death or resignation of one of the Trustees, the Council shall have power to fill the vacancy for the unexpired term of such Trustee.

SEC. 4. The Trustees shall have charge of all the real and personal estate of the Society.

SEC. 5. It shall be the duty of the Trustees to supervise and direct the Treasurer in the investment of the funds of the Society, and to report the investments and the condition of the funds and property aforesaid to the Council, when required and annually to the Society. All funds and property shall be used only as specified by the donors, and as provided by the Charter. No money shall be paid excepting on the order of the Trustees. All checks and all orders withdrawing deposits from any bank, trust company, or money institution, shall be signed by the Treasurer, only on the written order of the Chairman of the Board of Trustees.

SEC. 6. The Board of Trustees may make rules and regulations for its own government consistent with the By-Laws of the Society. A journal of the proceedings of the Trustees' meetings shall be kept, together with the names of the attending and absent members, and an abstract of the same presented as a part of the report of the Trustees, at the annual meeting of the Society.

CHAPTER XII.

THE COUNCIL.

SECTION 1. The officers of the Society shall constitute the Council.

SEC 2. The Council shall meet on the Wednesday preceding each annual and stated meeting of the Society.

SEC. 3. The President may call a meeting of the Council whenever he may deem it necessary.

SEC. 4. Five members shall constitute a quorum for the transaction of business.

SEC. 5. The journal of the proceedings of the Council shall be kept by the Secretary, and read at each annual meeting, together with the names of the attending and absent members; and if it shall appear that any member has been absent from three stated meetings in succession, without having assigned a satisfactory reason, he shall be ineligible to office for the ensuing year.

SEC. 6. The Council shall make the necessary arrangements for the meetings of the Society, and execute such other duties as the Society may direct. Its action shall at all times be subject to the approval of the Society.

SEC. 7. The Council may make rules and regulations for its own government, consistent with the By-Laws of the Society.

SEC. 8. It shall be the duty of the Council to take cognizance of breaches of the precepts of medical ethics, which shall be laid before it, and it may report the results of its proceedings thereon to the Society, if it think proper.

SEC. 9. The reinstatement of members shall be determined by the Council in conformity with Chap. xiv., Sec. 7.

CHAPTER XIII.

DELEGATES.

SECTION 1. The Delegates shall perform the duties required by the statutes of the State, and support the honor and dignity, and obey the orders and resolutions, of the Society.

SEC. 2. Any member elected as Delegate to the Medical Society of the State of New York, who shall be unable to act as Delegate during two successive years shall be considered to have vacated his position as Delegate.

CHAPTER XIV.

RESIDENT, NON-RESIDENT, CORRESPONDING AND HONORARY MEMBERS.

SECTION 1. All members shall consist of physicians and surgeons only.

SEC 2. It shall be the duty of every member to observe the codes of medical ethics adopted by this Society.

SEC. 3. At each meeting of the Society the members, on entering, shall write their names in a register provided for this purpose by the Secretary; and no member shall vote at any election until he has complied with this regulation.

SEC. 4. Every member shall observe order and decorum in the meetings, and pay due respect to the officers and members.

SEC. 5. Members who shall not have paid the annual dues for two years in succession, after having been twice in each year called upon to do so, are declared to be "in arrears with the Treasurer," and their names shall appear on his list of members suspended for unpaid dues.

SEC. 6. Members "in arrears with the Treasurer" shall neither be eligible to office nor entitled to vote at any annual meeting; neither shall they be entitled to the privilege of being notified of the meetings, nor of receiving publications from or through the Society.

SEC. 7. Any member who shall continue "in arrears with the Treasurer" for one year after having twice received due notice of the existence of this By-Law, and of the amount due from him, shall no longer be considered a member; and the member shall not be reinstated, except by a two-thirds vote of those present at a regular meeting of the Council, and upon such conditions as the Council may prescribe.

SEC. 8. Any member, not in arrears with the Society, who may permanently remove from the County of Kings shall be known as non-resident member. Such member shall not be required to contribute to the funds of the Society, neither shall he vote, be eligible to any office or appointment, nor receive notices or publications from or through the Society; but, in all other respects shall enjoy every right and privilege of a resident member. A non-resident member on returning to the county shall become an active member on payment of the dues for the current year.

SEC. 9. Physicians residing outside the limits of the County of Kings may become corresponding members under the same rules as resident members. Such members shall not be entitled to vote or hold office, but in all other respects shall enjoy the same privileges as resident members.

CHAPTER XV.

ADMISSION OF MEMBERS.

SECTION 1. Applications for membership shall be made at the stated meetings of the Society.

SEC. 2. The documents and testimonials relative to a candidate's professional and personal qualifications shall be given to the Censors whose duty it shall be to examine all such credentials and report thereon to the Council. Upon the report thus presented the Council shall accept or reject the candidate.

SEC. 3. If the candidate be accepted the Council shall so report to the Society at a stated meeting, and after the next succeeding stated meeting the President shall declare said candidate a member—provided, however, that before this declaration is made any member may demand (in writing, if not present) a ballot on the candidate's election. An affirmative vote of two thirds of all the members present shall be necessary to act.

Sec. 4. Every person thus admitted resident member shall, within three months after due notification of his election, pay an initiation fee of five dollars (which shall relieve him from any further assessment until the next annual meeting), sign the By-Laws, giving his age, place of birth, and the name of the institution whence he graduated, or forfeit his election.

Sec. 5. Every person thus admitted corresponding member shall, within six months after due notification of his or her election, pay an initiation fee of three dollars or forfeit the election.

CHAPTER XVI.

ETHICS AND DISCIPLINE.

Section 1. The precepts of the Codes of Medical Ethics of the American Medical Association, and of the Medical Society of the State of New York, shall be binding on the members of this Society, and any disregard or violation thereof shall be cause for investigation.

Sec. 2. The Council shall take cognizance of all complaints of breaches of the Code of Ethics which may be laid before it, and endeavor to reclaim offenders before proceeding formally against them.

Sec. 3. Charges (with specifications) of the violation of the laws or ethics of the Society, or immoral conduct, shall be presented in writing to the President, enclosed in a sealed envelope, with the words "Charges against a member" written upon it.

Sec. 4. The President, on receiving such charges, shall notify the Council to meet and examine the same, and the evidence thereon.

Sec. 5. If a majority of the Council shall be of opinion that the charges are well founded, they shall serve a copy of them upon the accused, and cause a special meeting of the Council to be called to investigate them; of which meeting the accused shall have at least ten days' notice, in writing, with an invitation to be present.

Sec. 6. After the investigation of charges the Council may, at its option, drop them, or report them to the Society and recommend some definite action thereon.

Sec. 7. Discipline by the Society may be of three kinds: admonition, suspension, and expulsion, and shall require the affirmative vote of two-thirds of all the members present when such action has been recommended by the Council, or of three-fourths when not recommended by the Council.

CHAPTER XVII.

ASSESSMENTS.

SECTION 1. The Society, at the annual meeting, shall order such assessments on resident and corresponding members as shall meet its requirements.

SEC. 2. The annual assessment shall be due at the beginning of the year for which it is voted.

CHAPTER XVIII.

HONORARY MEMBERS.

SECTION 1. Honorary members may be nominated at any stated meeting, and elected by a two-thirds vote at any subsequent stated meeting.

SEC. 2. Not more than three honorary members shall be annually elected.

SEC. 3. Honorary members may take part in debate, but shall not be entitled to vote.

CHAPTER XIX.

LICENTIATES.

(The law conferring the power upon medical societies to grant licenses having been repealed, this chapter of the By-Laws has been omitted by the committee.)

CHAPTER XX.

AMENDMENTS, ETC.

SECTION 1. Amendments proposed to these By-Laws can only be adopted at annual meetings. They shall be proposed in writing at any previous stated meeting, and the concurrent vote of two-thirds of the members present shall be necessary for their adoption. At the December meeting all proposed amendments shall be read to the Society.

SEC. 2. At any stated meeting any By-Law may be suspended for any length of time short of the next annual meeting of the Society, by the concurrent vote of three-fourths of the members present, the motion to that effect being presented in writing.